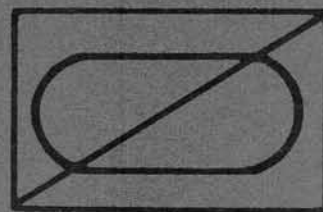


CAVALRY



FM 17-95

This copy is a reprint which includes current
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CHANGE
No. 2

FM 17-95
C2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 20 April 1981

CAVALRY

Effective upon receipt. This change updates FM 17-95, 1 July 1977. Changed material is indicated by a colored bar in the margin or star (★) preceding the material.

Make the following page changes.

Remove

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2-21, 2-22

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1-8.1

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File this change sheet in front of the publication for reference purposes.

C2, FM 17-95

20 APRIL 1981

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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CHANGE
No. 1

FM 17-95
C1

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Washington, DC, 7 January 1980

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Make the following page changes.

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7 JANUARY 1980

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CAVALRY

PREFACE

Cavalry is a combat maneuver force of combined arms mounted in ground and/or aerial vehicles. It is uniquely organized, equipped, and trained to find the enemy in order to prevent the friendly main body from being engaged under adverse circumstances and to provide, within its capability, security for the main body.

Cavalry organization and use exemplify two essential criteria of battle. The first is the need to find the enemy and develop the situation with the least force possible. The second is the need to provide reaction time and maneuver space with a force tailored to leave the largest possible residual of combat power in the main body available for use at the time and place of decision. These criteria are based on a principle of war—*economy of force*. Cavalry is an economy force.

Cavalry's basic tasks are reconnaissance and security. Cavalry accomplishes these tasks through combined arms action at all levels from the scout team through the regiment.

In order to see the battlefield and the enemy, cavalry must move continually and rapidly. Cavalry **moves to see** and **moves to fight**. When fighting outnumbered, it is necessary for any force of combined arms to move to mass sufficient force to accomplish its mission. This is more so with cavalry than with other forces, since *one of cavalry's prime tasks is to find the enemy and fight him*.

In order to **move to see** the enemy and **move to fight** the enemy, it is necessary for cavalry to suppress those enemy weapons which can hinder accomplishment of the cavalry mission. Field and air defense artillery, attack helicopters, and USAF tactical fighter-bombers must be organized and employed to provide sufficient suppression to enable cavalry to move.

In order to accomplish its mission, cavalry must frequently destroy sufficient enemy forces to convince the enemy to break off an attack, to give up a defensive area, or to move toward or away from an area vital to friendly forces. Therefore, more often than not, cavalry will have to fight to accomplish its mission.

To **move, see, suppress, and destroy** requires the ultimate in command control. Cavalry is equipped with a wide variety of extremely capable communications equipment which enables the cavalry commander to command and control his units over wide distances. This communication equipment is vulnerable to enemy electronic countermeasures, and Threat forces are well equipped and trained to take such countermeasures. Therefore, tight discipline and imaginative alternatives must be used by the cavalry commander to ensure he has positive control at all times.

The main body commander will always require real-time information of the enemy and of the status of operations in the cavalry unit. Of course, it is not possible to provide real-time information. However, the closer the cavalry unit can come to providing real-time coverage of the battlefield and the enemy, the more it will satisfy the most demanding of its tasks.

Finally, cavalry operations must be **supported** with combat support, especially the fuel, ammunition, and maintenance support necessary to keep the cavalry unit seeing, moving, suppressing, and destroying. Careful organization and aggressive operation of support activities are essential to sustained cavalry operations. This is especially true of logistics support operations.

This manual describes how cavalry fights to accomplish its basic battle tasks of reconnaissance and security. Cavalry organizations are integral parts of larger combined arms formations. How those larger combined arms formations and their subordinate elements fight is set forth in the 71 series field manuals. This manual describes how armored cavalry platoons, troops, squadrons, and regiments fight, and how air cavalry platoons, troops, and squadrons fight, regardless of their parent unit.

Remember that all Army units are organized under modified tables of organization and equipment (MTOE). Therefore, to know the manpower and equipment authorizations for a specific unit, it is necessary to consult the authorization document (MTOE) for that unit. Because organization and equipment varies by time and place, this manual discusses these factors in general terms only, relying on the reader to understand his own equipment and organization well enough to apply the principles in this manual.

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The US Army Armor School (USAARMS) is the proponent for this publication. Recommended changes and comments for its improvement are solicited. Prepare comments and recommended changes on DA Form 2028 and forward to Commandant, US Army Armor School, ATTN: ATSB-TD, Fort Knox, KY 40121.

To comply with guidance of the Assistant Secretary of Defense (Manpower and Reserve Affairs), this Field Manual has been reviewed for the use of neutral language. Unless otherwise noted, where the third person singular is used in this publication, the word "he" will be understood to stand for both masculine and feminine genders.

THE MODERN BATTLEFIELD: AN OVERVIEW

In past wars the US Army held a commanding position on the battlefield. We were able to field large forces with powerful weapons and often control the airspace. However, the world's weapons and armies have changed greatly in the last 20 years, and these changes seriously affect the US Army's ability to control the modern battlefield.

- One of the most important changes is the use of greatly improved weapons. Modern armies use long range, high-velocity tank cannon and antiarmor missile systems that dominate the battlefield. These weapons have tremendous ranges and are highly lethal; if the enemy can see you and you're within range, he can hit and kill you.
- Artillery and other indirect-fire weapons are also greatly improved over those of World War II. Their great range, wide casualty radius, and fire control measures let the enemy mass great amounts of fire on its opponents.
- Modern long range air defense cannon and missile systems are so powerful that they can dominate the air above the battlefield. Unless suppressed, these weapons limit close air support for frontline fighting units. Such enemy weapons force air cavalry and attack helicopter units to operate close to the ground—in the same battle environment as frontline fighting units.
- In future battles the US Army will be greatly outnumbered, especially overseas in the first battles of a war. To succeed, cavalry may have to destroy the enemy at a rate of five to one. Since future wars will probably be shorter than in the past, the US must win the first battles—and win them while outnumbered.

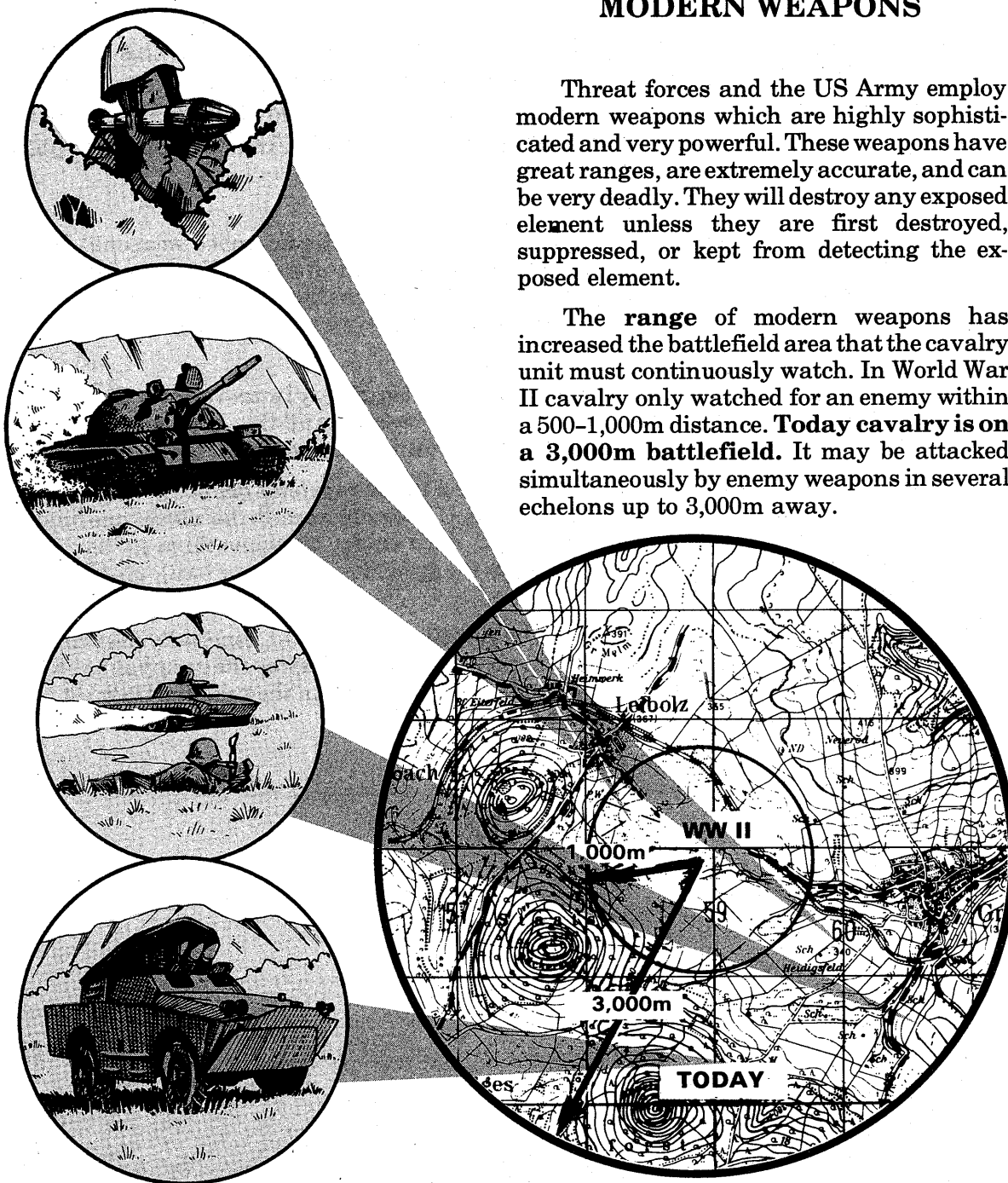
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Because of these changes, the US Army will find battles harder to win in the future. To overcome the enemy, we must train hard against these improved weapons and greater odds. **By thorough training and by understanding enemy weapons and tactics, the US Army will win the first battles—and future wars.**

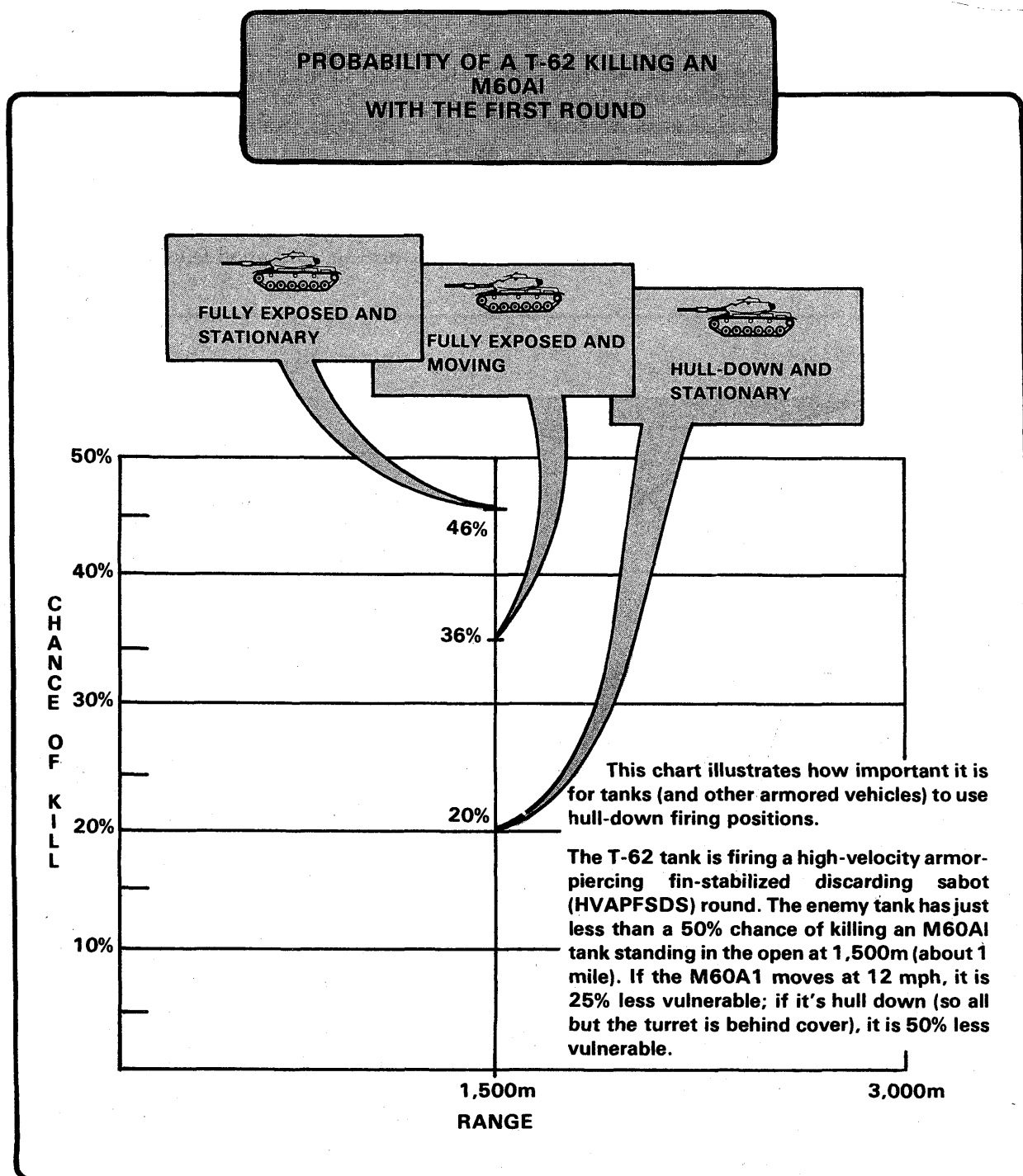
MODERN WEAPONS

Threat forces and the US Army employ modern weapons which are highly sophisticated and very powerful. These weapons have great ranges, are extremely accurate, and can be very deadly. They will destroy any exposed element unless they are first destroyed, suppressed, or kept from detecting the exposed element.

The **range** of modern weapons has increased the battlefield area that the cavalry unit must continuously watch. In World War II cavalry only watched for an enemy within a 500–1,000m distance. **Today cavalry is on a 3,000m battlefield.** It may be attacked simultaneously by enemy weapons in several echelons up to 3,000m away.



The **accuracy** of modern weapons is very great; tank guns are so accurate that they will usually get first-round hits. Their ammunition destroys both hard and soft targets.

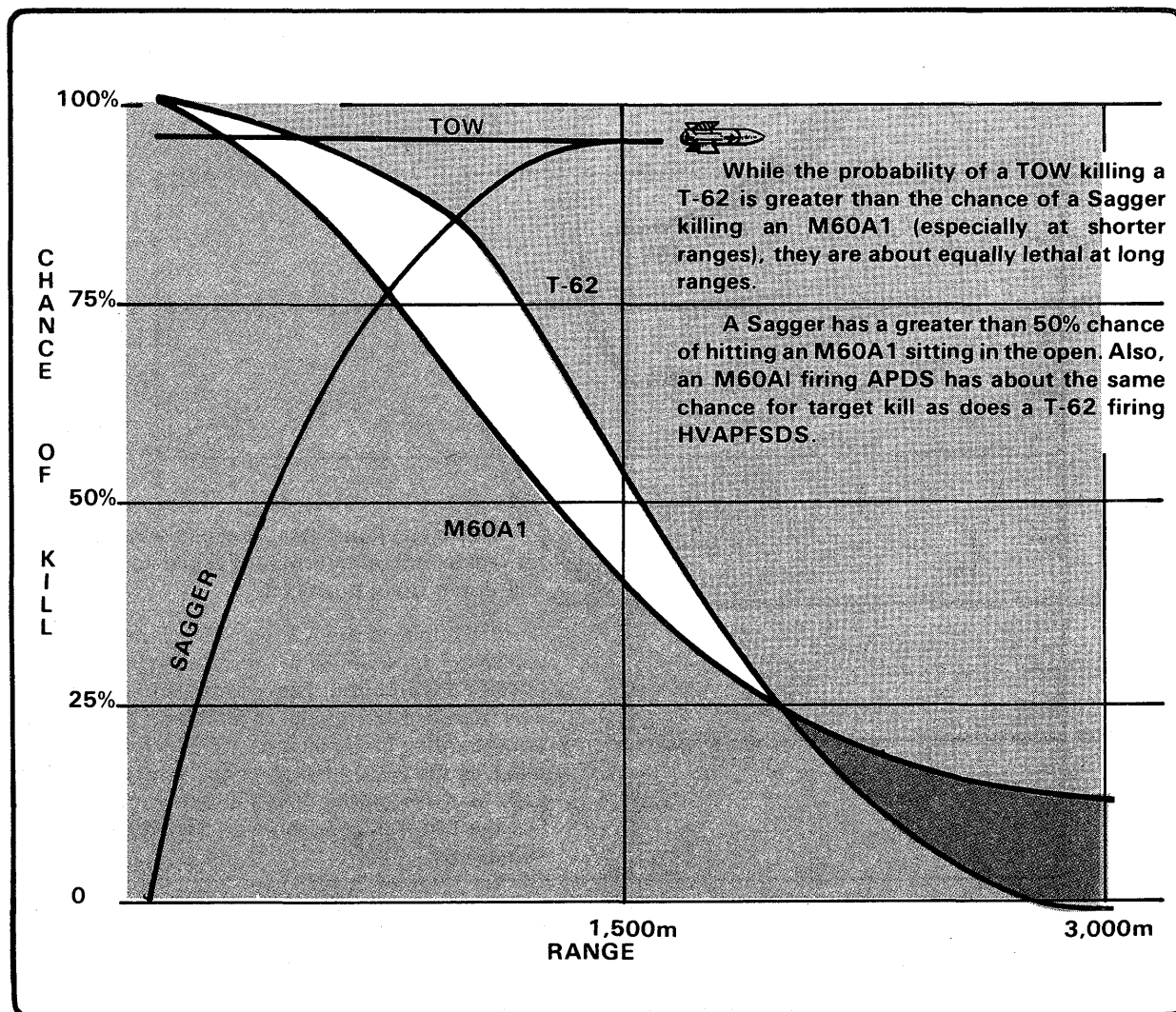


Modern ammunition is extremely **lethal**, being ten times more deadly than that of World War II. If this ammo hits its target, the chances for target destruction are very high—up to 95%. If you're hit, there's little chance for escape.

The enemy's weapons work well together; for instance the range, accuracy, and lethality of modern antitank guided missiles and tanks complement one another. These guided missiles are very accurate and destructive at medium to long ranges, while Threat tanks provide a great deal of accurate fire at medium to short ranges.

Don't make the mistake of thinking that US weapons are more sophisticated than Threat ones. Remember, the capabilities of US Army and enemy weapons are nearly equal. While one side may gain a temporary advantage from new weapon developments, the other side quickly offsets that advantage with similar improvements.

For example, the chart below shows the chances for target kill by the US M60A1 and the Threat T-62—their chances are about the same. The US Army must therefore gain any significant advantages by skillful tactics, sound training, and good leadership.



The lethality, accuracy, and range of weapons on the modern battlefield do not prevent successful operations. However, their presence means commanders must **minimize** their troops' vulnerability to enemy weapons while **maximizing** the capabilities of their own weapons.

To minimize vulnerability to enemy weapons:

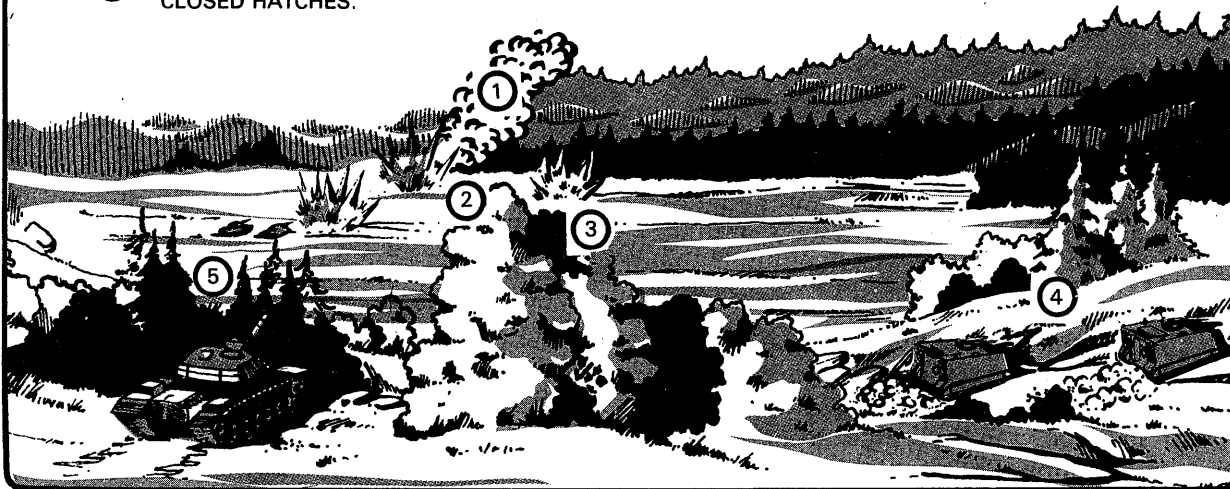
- **Avoid exposure**—don't let the enemy see you.

- **Suppress the enemy**—don't let him fire at you or at other friendly units.
- **Fire first**—destroy the enemy before he can hit you.

To avoid exposure to the enemy, **use the terrain to your advantage**. While moving or stationary, make the greatest use of all available cover and concealment. Travel on covered and concealed routes from one covered and concealed position to the next. Remember: use the terrain so the enemy can't see and shoot you.

OVERWATCH AND SUPPRESS

- ① PLACE SMOKE ON LIKELY ENEMY LOCATIONS.
- ② USE FIELD ARTILLERY AND MORTARS TO SUPPRESS KNOWN ENEMY LOCATIONS.
- ③ FORCE THE ENEMY TO FIGHT WITH CLOSED HATCHES.
- ④ USE FIRE FROM INFANTRY CARRIERS TO SUPPRESS ANTIARMOR WEAPONS.
- ⑤ USE LIGHT ARMORED VEHICLES AND TANKS TO KILL TANKS AND OTHER ARMORED VEHICLES.

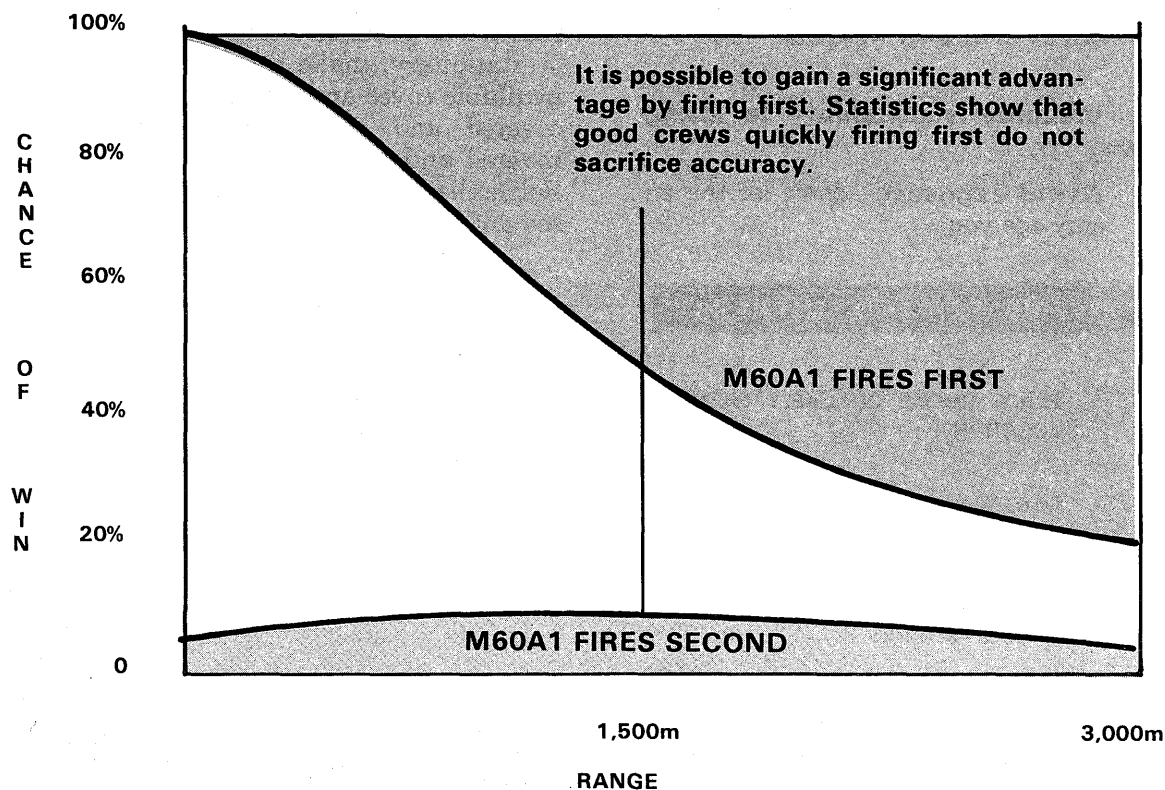


If you must travel exposed on the battlefield, **obscure your presence** with smoke, darkness, bad weather, electronic counter-countermeasures, or any combination of these and other methods. Hide your presence from the enemy.

No matter how carefully a unit uses the terrain, there will probably be places where

some elements must move while exposed. So, whenever a unit travels, **overwatch its moving elements** with another element placed to **suppress enemy fire**. If the enemy fires on an exposed element, the overwatch element destroys or suppresses the enemy while the exposed element moves to the nearest covered and concealed position.

**CHANCE OF WIN IN A 60-SECOND
DUEL BETWEEN
AN M60A1 AND A T-62
(T-62 fully exposed)**



To suppress the enemy, **use direct and indirect fire on known enemy locations.** If you suspect the enemy might be hidden in a certain location, use high explosive (HE) or white phosphorus (WP) ammo on that place to blind him. Smoke or HE ammo can remove enemy weapons from the battle, thus minimizing the unit's vulnerability and turning the odds in its favor.

For example, if two US tanks oppose six Threat tanks and US forces can suppress five of the Threat tanks, then the advantage becomes 2:1 in favor of the US.

When you spot the enemy, you can gain an important advantage by **FIRING FIRST!** This is especially true when you are exposed. A well-trained tank crew should fire the first round *within 5 seconds after target acquisition*. In doing so, the crew greatly increases its chances of winning.

For example, in a 60-second duel between two stationary tanks, the well-trained crew that fires first accurately multiplies its chance of winning two to nine times (depending on range). This tactic *minimizes* the tank's vulnerability while *maximizing* its weapons' capabilities.

To extend the advantage gained by firing first, the cavalry commander must control and distribute tank and antitank fires to kill targets quickly but save enough ammo to engage the next echelon. Tank crews should also stow plenty of ammo and fuel so they can reduce the frequency of resupply. The cavalry commander, however, should ensure that his resupply systems are quick, responsive, and secure.

MOBILITY

Modern armies are almost completely mechanized. Tanks, infantry combat vehicles, and helicopters give a mobility past armies never had. This mobility lets the commander:

- *Change the odds in his favor* so that his unit has a better chance of winning.
- *Seize the initiative from the enemy*, thus increasing the unit's chance of winning.

For example, in an *attack* the commander must concentrate enough force in one area to defeat the enemy there. He does this by rapidly moving cavalry units to get superior odds, conducting a hasty attack, and exploiting the outcome of that attack.

Through mobility the commander masses his forces in *defense* against an

enemy main attack. If he is outnumbered 10:1, he maneuvers so he is outnumbered only 3:1 or 4:1. He changes the odds so he can break the enemy onslaught by destroying masses of enemy tanks and vehicles attacking at that point.

- ★ Mobility of air cavalry allows teams to remain out of enemy artillery concentrations while aerial scouts identify gaps and maneuver in and around these concentrations in order to begin early engagements.

Cavalry's most difficult task is to see the battlefield and the enemy well enough to enable the cavalry unit itself or the main body to concentrate. Seeing the battlefield adequately depends in part on the use of special equipment, but most of all on the "mental mobility" of cavalry commanders, their command control capability, and the reaction of their well-trained cavalymen.

Mobility offers other advantages besides concentration. Threat forces use massive amounts of artillery; they fire extremely heavy preparations before attacking. If hit by this artillery, a cavalry unit could suffer serious losses. However, mobility lets cavalry minimize the effects of enemy artillery fire. Cavalry should:

- *Move after shooting* to avoid enemy artillery fire.
- *Move out from under heavy artillery fire when it falls on team positions* to an alternate position.

NIGHT FIGHTING

Modern armies can fight at night by using sophisticated sighting and sensing equipment. A new range of tactical possibilities is opened by new tank sights, night vision goggles, antitank guided missile (ATGM) sights, and thermal imagery devices. Even with these devices, most weapons are still somewhat less effective at night than in day. However, cavalry must take advantage of its night-fighting equipment; it must be ready to fight at night as in the day.

Threat forces are skilled in night fighting. They use the poor visibility of darkness to continue pressing the attack. To do this, they try to:

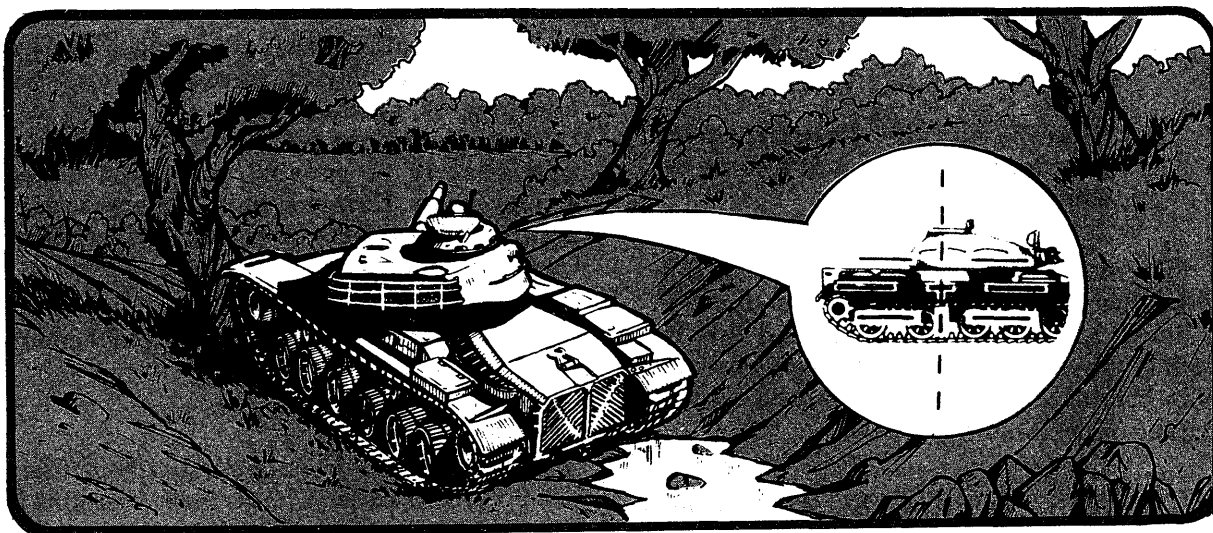
- Achieve surprise.
- Bypass or breach defensive positions and obstacles.
- Destroy and disrupt command, control, and support systems.

So, to defend against Threat forces, cavalry must make maximum use of night-fighting equipment, especially the passive night viewing devices. If it does, it can keep the tactical advantages that the defender normally has.

Night vision equipment lets the cavalry unit fire and maneuver at night almost as in daylight. The unit can thus attack at night with more freedom of movement and fewer restrictive control measures than in the past. However, night offensive operations still need more preparation and carefully designed control measures than are, in most cases, required in daytime. These include:

- *Careful preparation during daylight hours to reduce confusion.*
- *Carefully planned primary and alternate means of communication to ensure command and control.*
- *Carefully planned and coordinated suppressive fires.*
- *Concentration of forces at the chosen place and time.*

The force which can operate at night as it does in the day by fully using cover, concealment, suppressive fires, and night vision equipment can easily defeat the force that does not. Cavalry, then, must fight at night as in the day.



The fighting capability of air cavalry units is somewhat limited during periods of darkness. Helicopter crews increase their navigation and target acquisition capability by using night vision devices. However, illumination, such as artillery or mortar, must be used to engage targets with antitank guided missiles (ATGM's).

The *advantages* of night terrain flight are:

- Engagement by the enemy's conventional weaponry and missile systems which utilize visual detection is more difficult.
- Threat ground observers cannot determine the direction from which a helicopter is approaching until it is at close range.
- Detection of a helicopter by enemy tactical air is more difficult.

The *disadvantages* of night terrain flight are:

- Navigation is difficult due to the limited ranges at which terrain features can be identified.
- Margin of flight safety is reduced.
- Meteorological conditions may significantly restrict nap-of-the-earth (NOE) flight.
- Pilots may suffer vertigo due to lack of visual references.
- Target acquisition and range determination are more difficult at night.

For a complete discussion of night terrain flight and its limitations, see FM 1-51, Rotary Wing Flight.

Although the aeroscout will adhere to the same tactics at night as in the day, the aeroscout should take into account:

NIGHT VISION

The aeroscout must make every effort to conserve his night vision. He should be aware of human eye limitations and night adaptation techniques and must maintain light discipline at all times. Exterior aircraft lighting should not be used except in emergency situations (TC 1-31). Interior lighting should be set at the minimum necessary to safely accomplish the mission. While airborne, the flight route should avoid direct overflight of illuminated areas. Aircrews must be alert to tactical light sources (flares, searchlights) that may be encountered and be prepared to apply protective measures against loss of night vision. When aeroweapons aircraft are expending ordnance, do not watch; rather, position your aircraft where the weapon flashes will not cause distraction. If a flash of high intensity light is expected from a specific direction, crewmembers may turn the aircraft to minimize exposure to the light source. When such a condition occurs unexpectedly and direct view cannot be avoided, dark adaptation can be preserved by covering or shutting one eye while using the other to observe. Once the light source is no longer a factor, the eye which was covered will provide the night vision capability required to conduct the flight. When flares are used in a night tactical operation or are inadvertently detonated above your position, fly the aircraft as close as feasible to the periphery of the illuminated area.

MISSION PLANNING

Daylight reconnaissance. The scout crew (pilot and observer) and the aero-weapons/attack helicopter crew (pilot and copilot/gunner) must perform a daylight reconnaissance of the areas in which night missions will be flown to obtain information on terrain conditions, landmarks and obstructions to flight. The importance of prior daylight reconnaissance of the area of operations to air cavalry units cannot be overstressed. Crews familiar with the operational area will function much more effectively than those who view the area of operations for the first time at night through night optics. By noticing differences in terrain from daylight to dark, aeroscouts can detect the enemy faster. Air cavalry units should have thoroughly rehearsed their contingency mission to include routes to and from the area of operations.

Map and intelligence update. Current, accurate maps and intelligence, both friendly and enemy, will be critical to night missions. The problem of limited depth perception experienced with current night vision equipment, the reliance placed on instruments, and the low altitude environment crews and teams will be operating in will require up-to-date map intelligence. Recent intelligence on the disposition of friendly and enemy units will be necessary to ensure high priority potential enemy locations are reconnoitered and intelligence confirmed. Knowledge of friendly unit disposition will be necessary to ensure friendly units are not mistaken for enemy units.

Size of operational unit areas. Night operations are slower paced due to the increased problem of command and control and the limitations of night mission optics.

Therefore, the scope and the area of operations are reduced.

While areas of responsibility will not be reduced during night operations, actual reconnaissance zones will have to be reduced. Night reconnaissance will be restricted to those areas of most probable enemy activity. The gaps between these areas will be covered by surveillance devices; that is, manual (radar) or unattended sensors.

Control measures and coordination with friendly units. Control measures for night operations will be more restrictive than those used during day operations. Coordination of routes to and from the area of operation, passage points, the use of phase lines, boundaries, contact points, coordination points, recognition signals, FARP locations, unit dispositions, and emergency procedures are planned in detail for night operations. Close coordination with friendly units, to include artillery and air defense elements, is necessary.

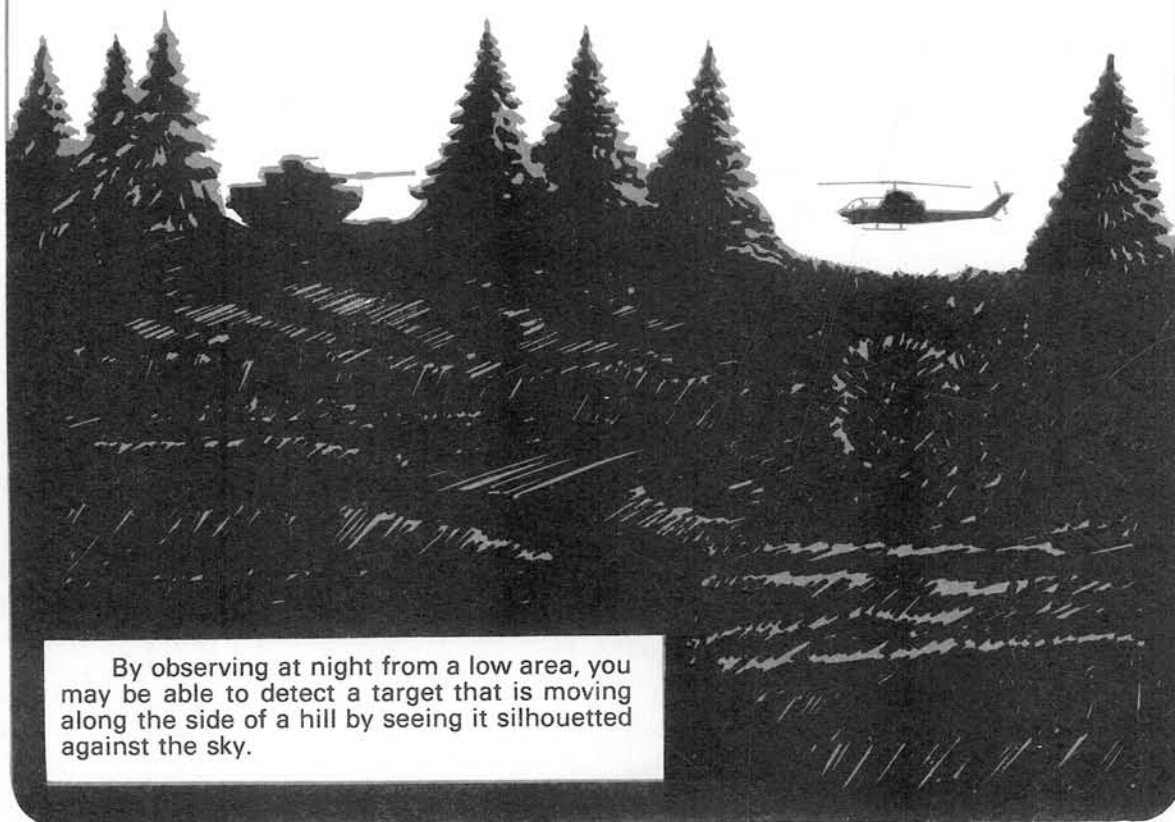
The unit must train to fight at night as in the day—that is, make full use of cover, concealment, and suppressive fires to defeat the force that does not. Night training must include daylight maneuvers and emergency procedures. Night flight training, coordinated with ambient light intensity levels of moon phases and other hemispherical illumination, provides an opportunity to develop low-level night operating capabilities.

Night training must be approached in three distinct and progressive phases based on a high degree of daylight skills. In the first phase, aircrews must be brought to a level of confidence and proficiency in conventional night operations. The second phase involves exposure to the night terrain flight environment. In both phases, the aircrewmembers must be able to accomplish their

missions without the assistance of night vision aids. The third phase should serve to introduce effective night operations using night vision aids that can greatly enhance aviation capabilities. Proficiency in night

flight is realized only through intensive and repetitious practice. *It is the commander's responsibility to bring his unit to this peak and thus increase both the unit's staying power and combat capability.*

STAY OFF THE SKYLINE, EVEN AT NIGHT.

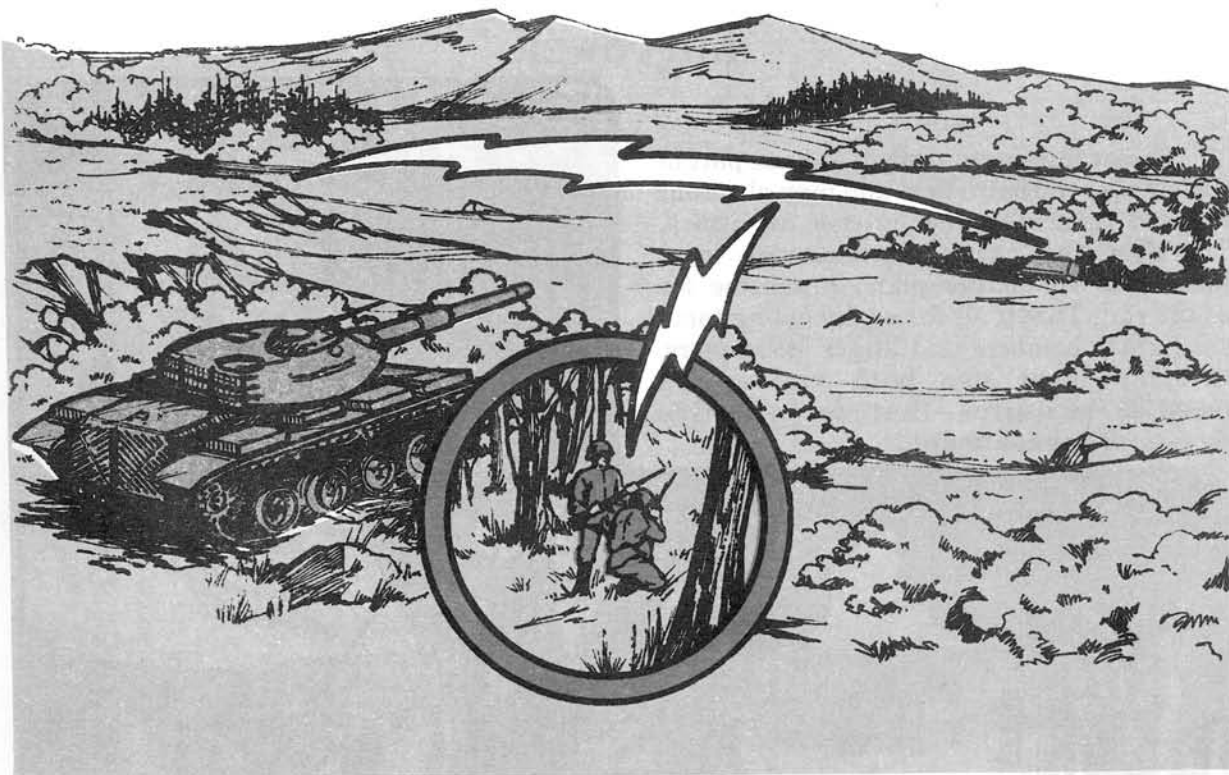


By observing at night from a low area, you may be able to detect a target that is moving along the side of a hill by seeing it silhouetted against the sky.

AIR POWER

Threat forces can control at least part of the air over the battlefield and may place our forward elements under intense air attack. Therefore the cavalry commander must include in his battle plans a scheme for countering Threat air forces, including tactical fighter bombers and attack helicopters. Cavalry must use both active and passive measures—that is, effective fires and concealment.





COMMAND CONTROL

Reliable, flexible, and responsive command control systems are essential to successfully employing cavalry. These systems provide:

- *Control of highly mobile, fast-moving cavalry maneuver elements.*
- *Direction and coordination of fires of many weapons, sited at different ranges and locations and firing in support of cavalry operations.*

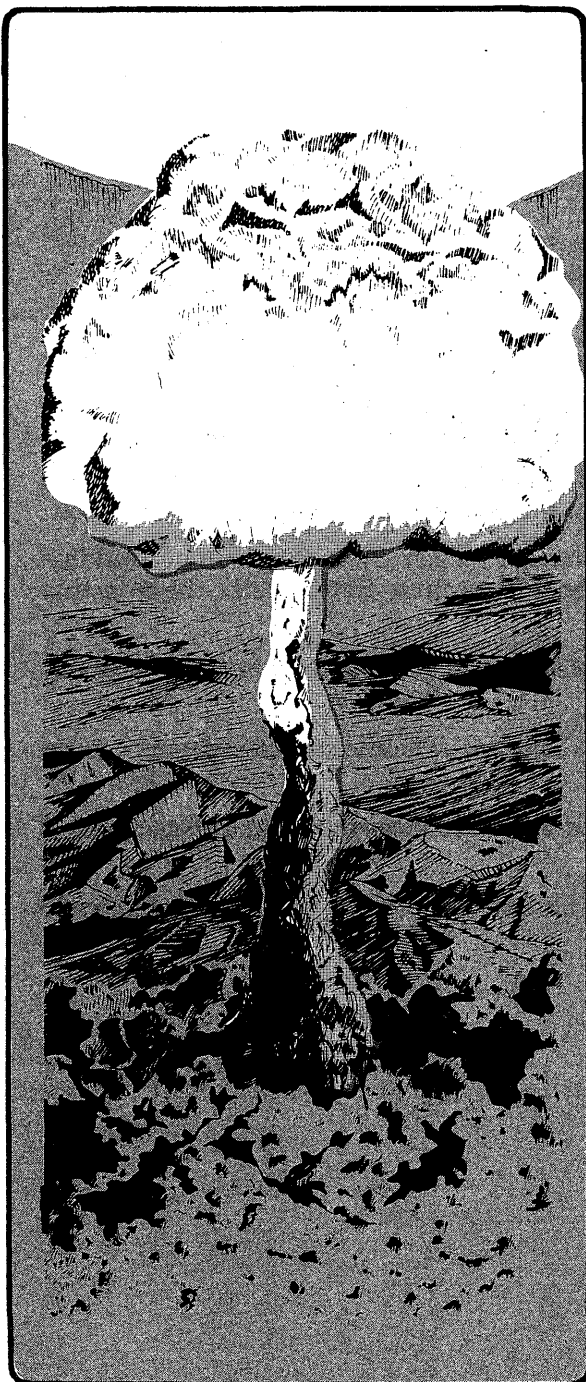
The enemy has a significant electronic warfare (EW) capability. He can block radio transmissions during critical periods in the fight. He can listen to transmissions to gain information and can give false instructions through imitative transmissions. Also, he can locate US Army positions with direction-finding (DF) equipment. Despite these enemy

efforts to interfere, the commander must command and control his unit throughout the battle. To do this, unit members must effectively counter enemy EW efforts against command and control systems by:

- *Using prearranged signals and visual means whenever possible.*
- *Using radio **only when necessary** and then transmitting as quickly as possible.*
- *Planning an alternate means of control in case primary means are suppressed.*

Some confusion in battle will certainly occur. However, if the commander has sure control and issues clear, concise orders, confusion and misunderstanding can be minimized.

NUCLEAR, BIOLOGICAL, AND CHEMICAL OPERATIONS



With the advance of nuclear technology, many armies will soon be able to use nuclear weapons. It is the policy of the United States not to employ nuclear weapons unless the enemy uses them first, or unless conventional defenses become inadequate. However, the US Army must be ready to fight and win when nuclear weapons are used.

While the destructive power of nuclear weapons makes the battlefield an even more dangerous place than it might be without them, remember that:

- *Nuclear weapon effects must be exploited by ground forces.*
- *Nuclear weapon effects are greatly minimized by mistakes in target locating and weapon delivery. Armored units can move rapidly, preventing the enemy from locating them accurately enough to make an effective nuclear strike.*
- *Aarmor protection and mobility are the best possible defense against nuclear weapons; cavalry has both. Cavalry units are usually not good nuclear targets because of the dispersed nature of most cavalry operations.*

The United States has renounced the use of biological agents and will not use chemical weapons first. However, other armies have these weapons and are prepared to use them. These weapons could severely reduce mobility and the ability to concentrate force—unless US soldiers understand the effects of such weapons and know how to fight in a chemical and biological environment. The force that can live in this environment and still move, use terrain and overwatch, suppress, and concentrate superior force, will defeat the side that cannot.

SUMMARY

The characteristics of today's battlefield are a formidable challenge to cavalry. The cavalry commander and his soldiers must understand the dynamics of modern battle. To win, they must:

- *Find and identify the enemy at the greatest possible distances from the friendly main body.* This prevents early engagement of an unwarned, poorly deployed main force.
- *Fire first in a tank battle,* especially at antiarmor targets. Accuracy is important in a tank duel, but firing *accurately and first* is most important. Statistically, the team that fires first wins four out of five battles.
- *Move only along covered and concealed routes, skillfully using terrain to avoid enemy long range observation and fire.*
- *Suppress with direct and indirect fires.* This lessens the chance that the enemy can see and attack maneuvering forces.
- *Operate during limited visibility or in darkness.* This reduces the range and accuracy of enemy observation and fire.
- *Maintain precision, discipline, speed, and security in directing and reporting the battle unaffected by enemy countermeasures.*

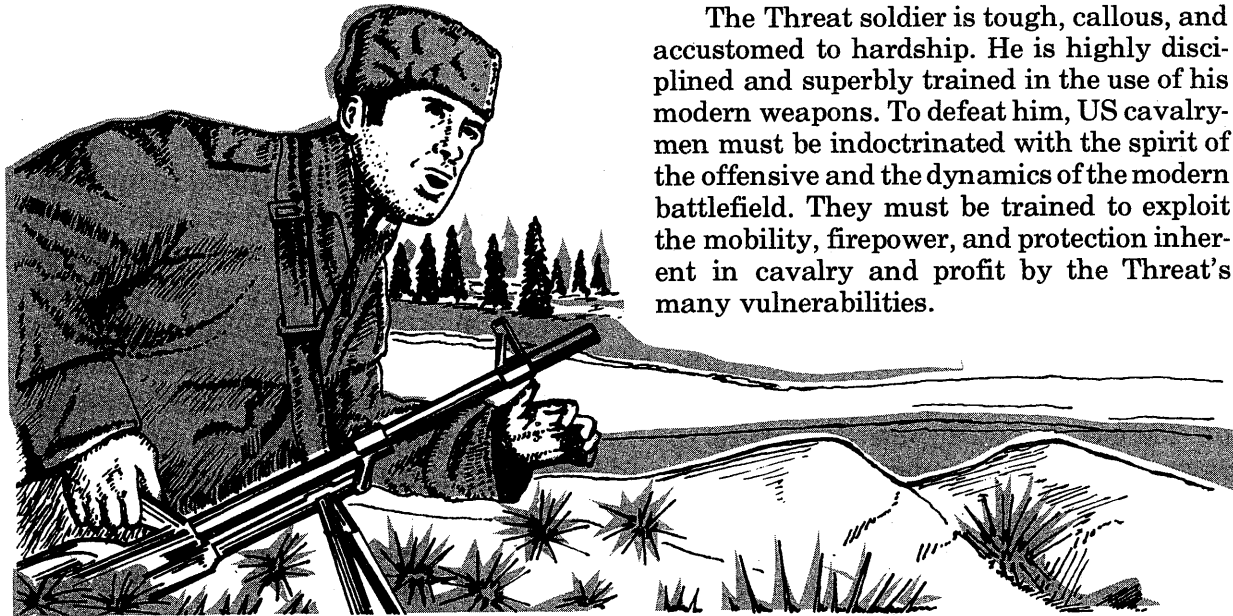
THE ENEMY IN MODERN BATTLE

The enemy - the "Threat" - is one of the largest, best equipped, and best trained armies in the world. It is heavy in tanks and artillery and is basically a mounted force. It has a family of weapons that complement each other in battle. Threat tactics stress massing men and weapons in depth to overpower the opposition. This chapter describes the Threat in sufficient detail that US cavalrymen can train to counter Threat strengths and take advantage of Threat weaknesses to win the first battle of the next war—outnumbered. In describing the Threat, this chapter discusses the individual soldier as well as each type weapon the US cavalryman is likely to face in great numbers. The discussion includes not only their strengths and weaknesses, but also suggestions for defeating each Threat weapon. These weapons are shown together in attack and defense settings to give a more complete picture of Threat capabilities.

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THE THREAT SOLDIER

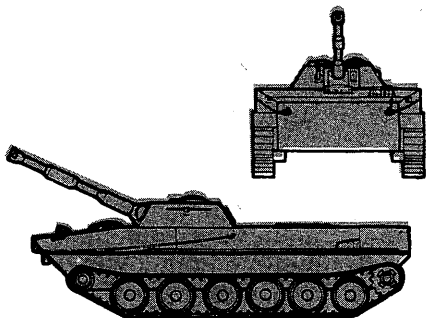


The Threat soldier is tough, callous, and accustomed to hardship. He is highly disciplined and superbly trained in the use of his modern weapons. To defeat him, US cavalrymen must be indoctrinated with the spirit of the offensive and the dynamics of the modern battlefield. They must be trained to exploit the mobility, firepower, and protection inherent in cavalry and profit by the Threat's many vulnerabilities.

THREAT WEAPONS

TACTICAL VEHICLES

Tanks. Threat main battle tanks are smaller than the US main battle tank. They have a cruising range of about 300 miles without auxiliary fuel and can attain speeds of about 30 mph. Threat tank fire control is relatively simple compared to that of US tanks. Currently, they mount no rangefinder similar to those on US tanks. Most Threat main battle tanks are equipped with active infrared (ir) night viewing devices, and have a superior underwater snorkeling capability.

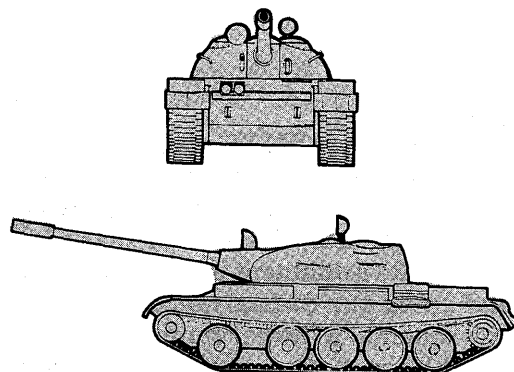


PT-76.

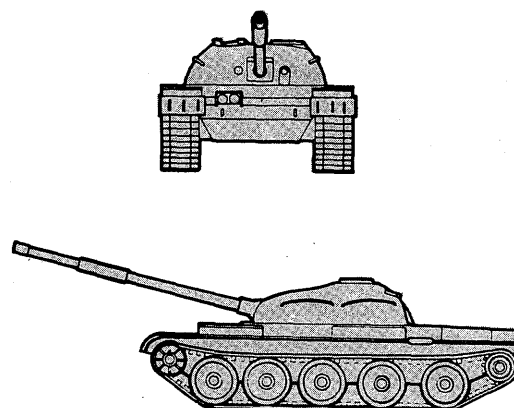
The PT-76 tank is a light-weight, amphibious reconnaissance vehicle with a 76-mm main gun and a 7.62-mm coaxial machinegun. Some vehicles may be fitted with a 12.7-mm machinegun for air defense. This tank is normally found in a reconnaissance role in front of the main Threat force.

T-55.

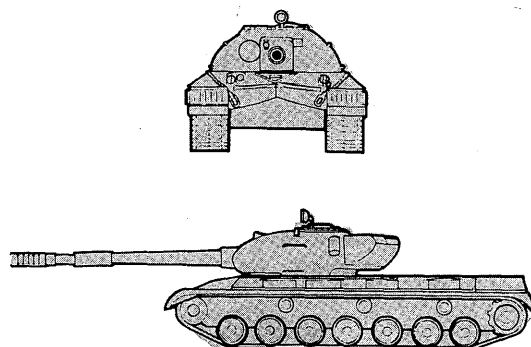
The T-55 tank was developed after World War II as the Threat main battle tank. The vehicle is armed with a 100-mm rifled bore main gun, a 7.62-mm coaxial machinegun, and on some older models, a 7.62-mm hull-mounted machinegun. It has standard infrared night sight and driving equipment and snorkel capability, and it is found in most combat units.

**T-62.**

The T-62 is replacing the T-55 tank. The most significant feature of the tank is its 115-mm smoothbore gun. The T-62 tank has standard infrared night sight and driving equipment as well as a snorkel capability. Additional armament includes a 7.62-mm coaxial machinegun. The T-62A tank, which appeared in 1970, is identical in appearance to the earlier model except that the right side of the turret has been redesigned to allow the mounting of a 12.7-mm antiaircraft machinegun at the loader's position. *The maximum effective air defense range of the 12.7-mm is 1,000m.*

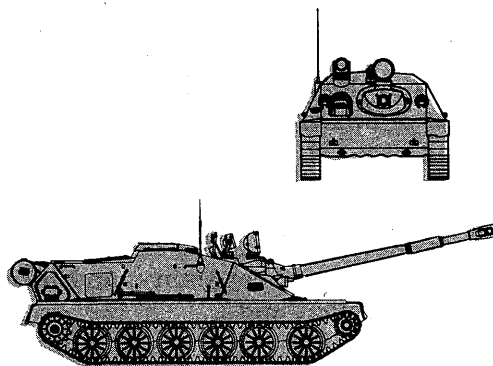
**T-10.**

The T-10 heavy tank is rarely seen in Threat forward areas. This tank stays in the rear and is used in counterattacks or with tank killer units. It is equipped with infrared sights or devices for all crew members, and has seven pairs of road wheels. Its primary weapon is a 122-mm stabilized gun firing kinetic energy armor-piercing cap and chemical energy high explosive antitank ammunition. It has two 12.7-mm machineguns, one for antiaircraft and another mounted coaxially with the main gun.



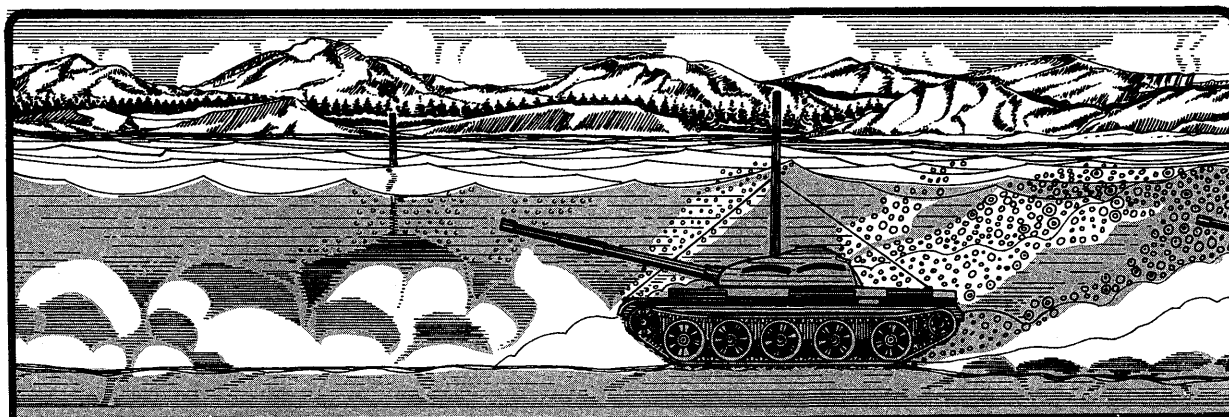
ASU-85.

The ASU-85 airborne assault gun provides armored striking power to airborne forces. Although not amphibious, the ASU-85 chassis is based on that of the PT-76 tank. Its armament is an 85-mm main gun and a 7.62-mm coaxial machinegun. The ASU-85 mounts a large gunner's infrared searchlight above the mantlet and carries a small commander's light.

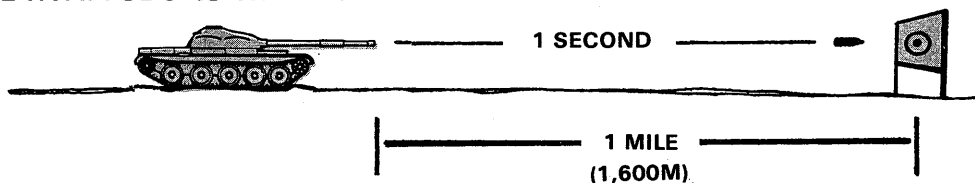


Strengths. The strengths of Threat main battle tanks are:

- *Low silhouette*, which makes them harder to hit.
 - *Simple fire control*, which makes them easier to operate and maintain.
 - *Infrared night vision devices*, which increase effectiveness at night.
 - *Underwater snorkeling*, which permits them to cross water barriers quickly.
- *The high-velocity 115-mm APFSDS tank-defeating round*, which travels a mile every second. The accuracy of this round gives T-62 tank crews a 50% chance of hitting a stationary target in the open with the first round at ranges to 1,500m, or a moving target traveling at a constant speed in the open at ranges to 1,000m.



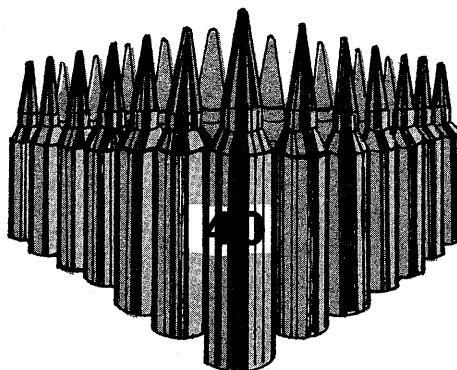
THE HVAPFSDS IS THE FASTEST TANK CANNON ROUND IN THE WORLD.



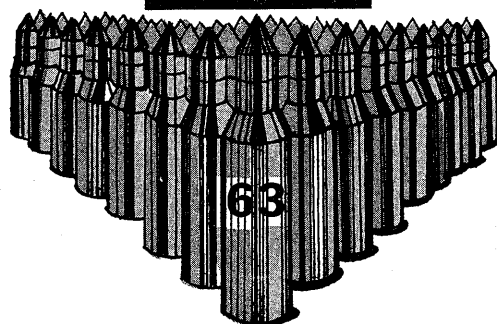
Weaknesses. The weaknesses of Threat main battle tanks are:

- Threat tank fighting compartments are considerably smaller than those in US tanks. The crew is cramped and freedom to move is restricted. Crew fatigue can therefore be a bigger factor in Threat tanks.
- Smaller turret interior and larger (115-mm) main gun ammunition means that Threat tanks have a slower rate of fire than US tanks.
- Because of its small fighting compartment, the T-62 tank has 23 fewer rounds of main gun ammunition than the M60A1. Therefore, in tank duels Threat tanks may run out of ammunition sooner than US tanks.
- Some main gun ammunition is strapped along the turret walls, and hits above the turret ring may cause secondary ammunition explosions.

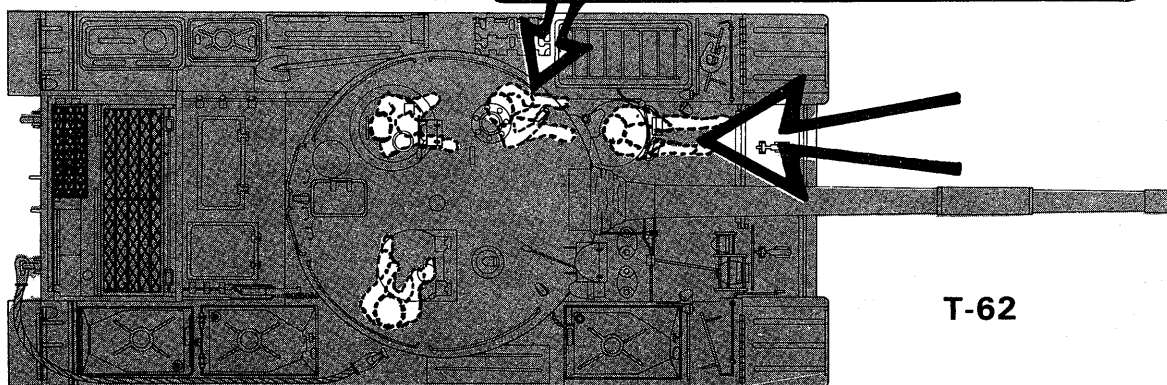
T-62



M60A1



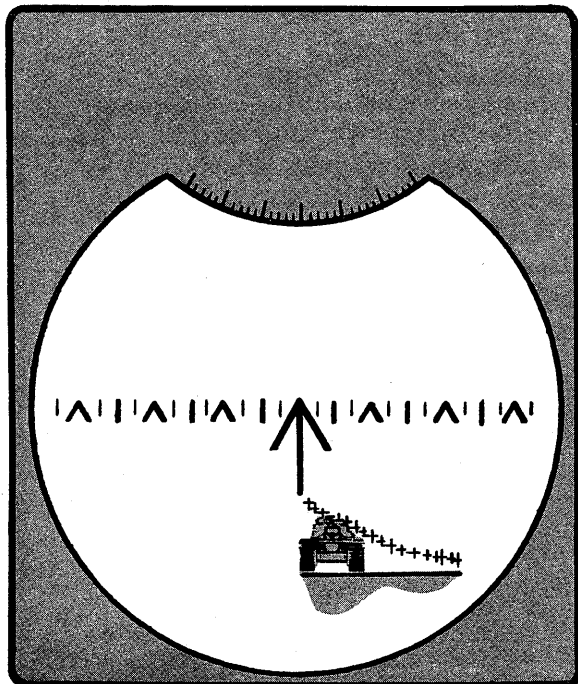
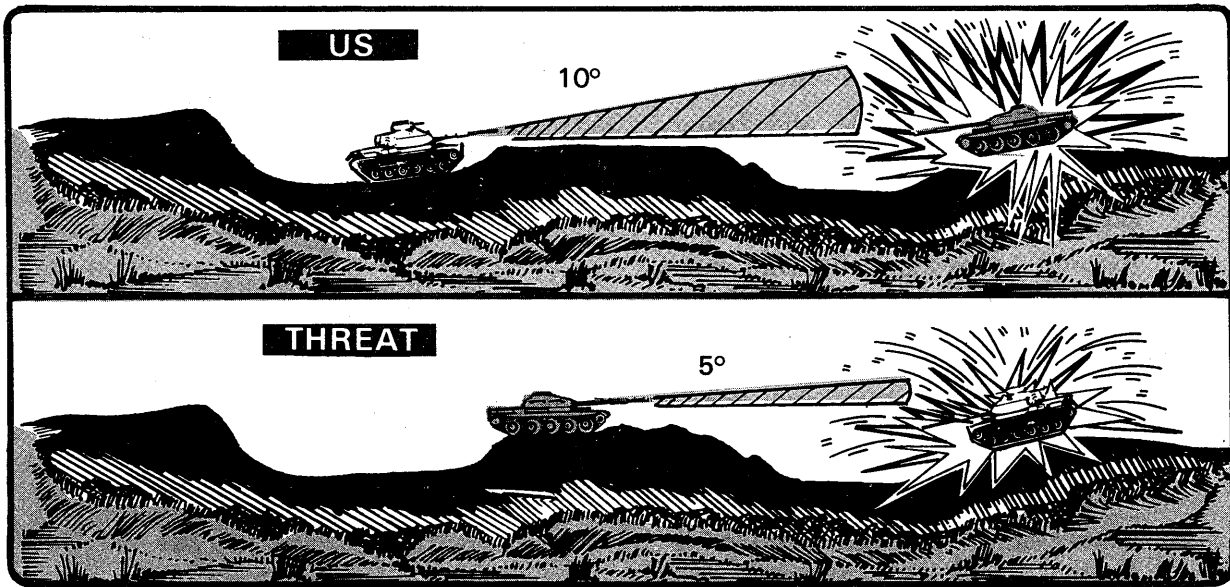
Positions increase Threat crew vulnerability. A penetration of the left front of the hull could hit the driver and gunner; a penetration of the left front of the turret could hit the gunner and TC.



T-62

- Because of their low silhouettes, Threat tanks can't depress their main guns as far as M60 tanks. This means that in certain situations Threat tanks must be exposed more than US tanks when firing their main gun.

- Since current Threat tanks are not equipped with rangefinders, their precision gunnery is less accurate than ours. Presently, the stadia reticle is the only optical aid the Threat tank gunner has to determine range.



To find the range, the gunner places the target within the stadia and base lines and reads the range where the tank touches the stadia line. The stadia line is based on the height (not width or length) of a fully exposed M60A1 tank.

If the US tank is not fully exposed, the gunner can't range accurately—another reason for US tankers to use hull-down positions.

- Threat tank turrets can't traverse nearly as fast as ours. This enables US tankers to engage flank targets sooner, and track moving targets better than Threat tankers.

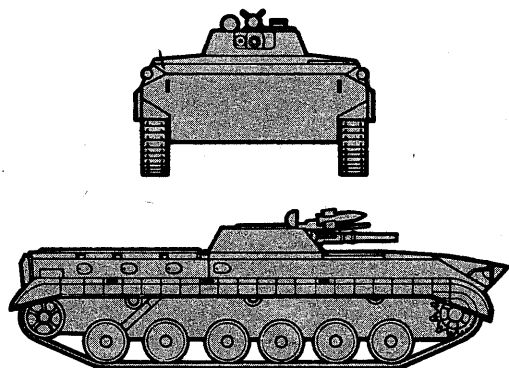
- Most Threat tanks stow a combination of ammunition and fuel in the right front of the hull. A round into this area will probably result in a catastrophic kill.
- Threat tanks also have external fuel tanks mounted flush with the top of the rear deck. If these have not been dropped, subjecting them to artillery or direct fire will cause them to burn.

Suggestions. To reduce the odds and minimize Threat weapon effectiveness:

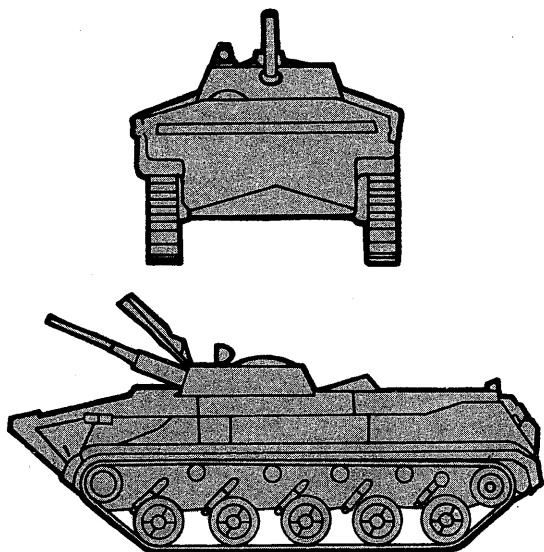
- Use terrain to best advantage while moving.
- Use hull-down firing positions.
- Avoid neat geometric formations.
- Move using overwatch.
- Suppress likely enemy positions using a variety of means: tank, light armor vehicle, artillery, mortar, and air fires.
- Obscure the target with tank white phosphorus (WP) or mortar/artillery smoke/WP.
- Conceal your positions using vehicle-mounted grenade launchers when available.
- Make abrupt speed and direction changes (zigzag).



Infantry Combat Vehicles.



BMP. The amphibious BMP is used as both a reconnaissance and an armored fighting vehicle. The armored infantry version of the BMP has a crew of three—gunner, driver, and vehicle commander and has a rear compartment troop capacity of eight. There are four periscopes and firing ports on each side allowing the infantry to fire from inside the vehicle while on the move. Its main armament is a 73-mm smoothbore gun with a Sagger missile rail mounted over the gun. A 7.62-mm PKT coaxial machinegun is mounted on the turret. Each BMP has racks for two Sagger missiles.



BMD. The airborne amphibious combat vehicle, BMD, resembles the BMP. It has five evenly spaced road wheels on each side and is 5m long. It is air droppable, carries six troops, and has a turret similar to the BMP with a 73-mm gun and a Sagger missile launch rail. The BMD is amphibious and has a water propulsion system similar to the PT-76.

Scout Vehicles.

BRDM-2.

The BRDM-2 is a four-wheel-drive amphibious scout car adaptable for many uses on the battlefield. It can be used as a command vehicle, an NBC test vehicle, an antiarmor vehicle, or an ADA vehicle. Cross-country mobility is improved by a centralized tire pressure regulation system, and by four retractable auxiliary drive wheels located

under the center of the vehicle which can be lowered to aid flotation and help in crossing gaps. The rear mounted power plant is improved over that of the first BRDM's. Its armament is a turret-mounted 14.7-mm machinegun. Its armament in the basic reconnaissance car is two machineguns mounted on the turret.



BRDM-2



**CHEMICAL RECONNAISSANCE
VEHICLE**



COMMAND VEHICLE



ATGM LAUNCHER



RECONNAISSANCE CAR



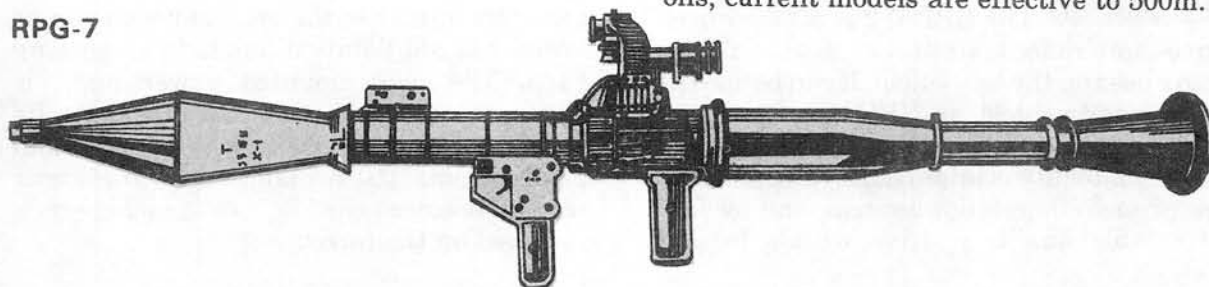
**ANTIAIRCRAFT MISSILE
LAUNCHER**

ANTITANK WEAPONS

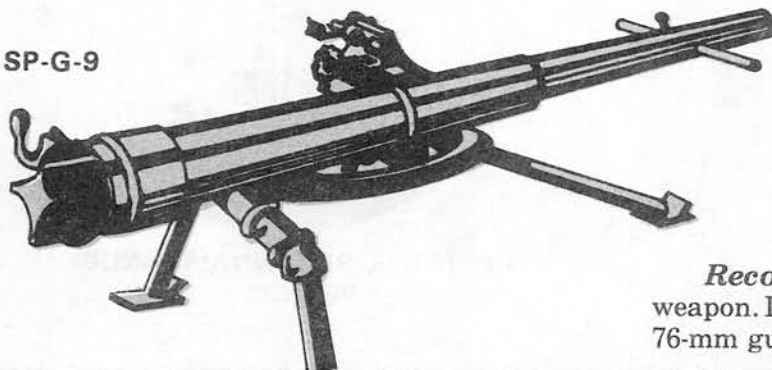
In addition to large numbers of armored vehicles, Threat forces can be expected to saturate the battlefield with rocket-propelled grenades (RPG's), recoilless guns, and antitank guided missiles (ATGM's).

Rocket-Propelled Grenades. RPG's are shoulder-fired infantry antitank weapons; current models are effective to 500m.

RPG-7



SP-G-9



Recoilless Gun. The SP-G-9 is a new weapon. It is a tripod-mounted, man-portable, 76-mm gun with a locked breech.



Antitank Guided Missiles. Threat forces have deployed two types of ATGM's in large numbers: the Sagger is wire-guided and thus invulnerable to electronic countermeasures (ECM), and the Swatter is radio-guided and vulnerable to ECM.

ATGM's are highly accurate to 3,000m. They are highly mobile and can defeat all known armor.

Missiles can be mounted on BMP's, BMD's, BRDM-2's, and helicopters.

"Suitcase" Sagger's can be man-packed and ground-mounted. In this version, the Sagger is easily carried by its crew. Its light weight and small size make it easy to transport, set up, and camouflage.

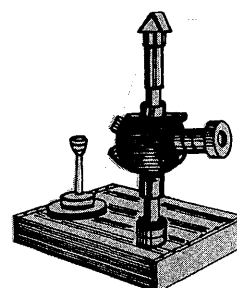
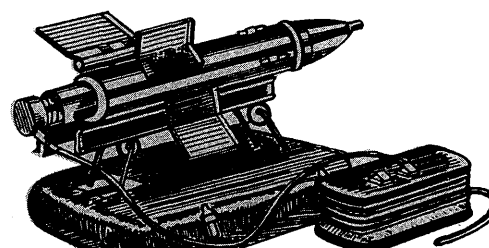
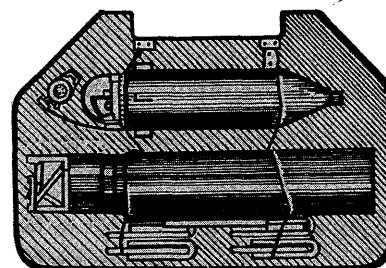
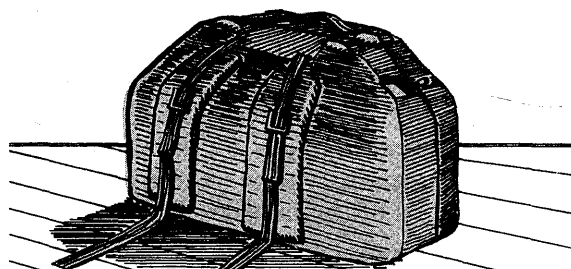
Strengths. The main strengths of Threat ATGM's are:

- *Long range accuracy and lethality*, which permits them to *hit and defeat* all known armor up to 3,000m away.
- *Versatility of employment*, which enables ATGM's to be fired while crewmen are buttoned-up and, in the case of the Sagger on a BRDM-2, at a remote position up to 80m from the vehicle. The "suitcase" Sagger may be remotely fired from a position up to 15m from the launching rail.

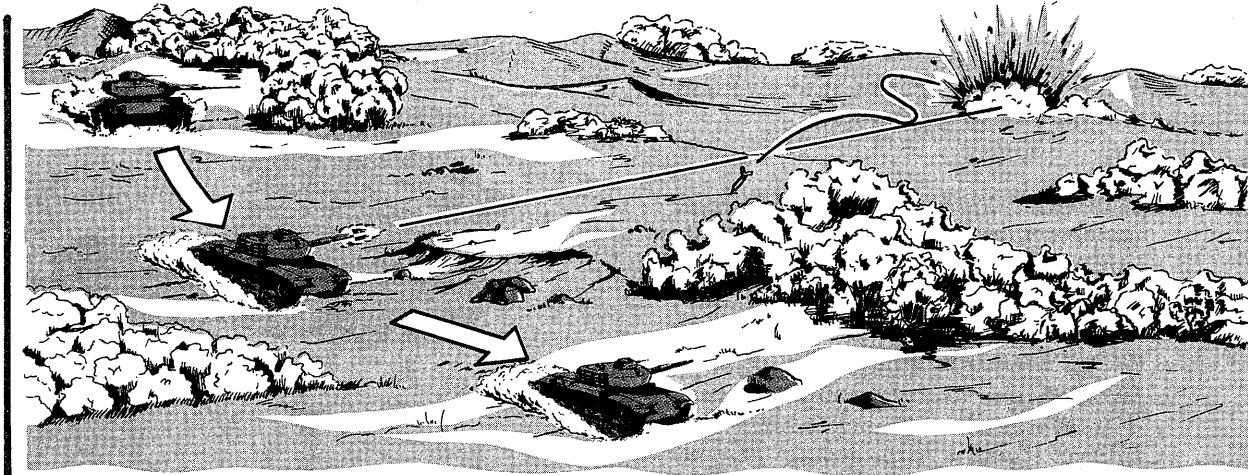
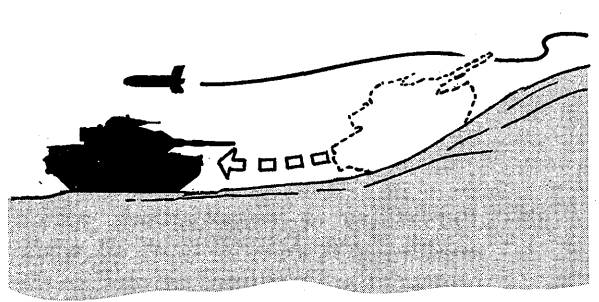
Weaknesses. In spite of their reliability, mobility, and long range effectiveness, Threat ATGM's have weaknesses.

- Gunners must have good visual contact with both target and missile during flight. Threat ATGM's are not effective at night. US cavalrymen who move behind cover, obscure themselves by smoke, or conceal themselves in vegetation reduce Threat missile and rocket hit probability. Bushes can break Sagger guidance wires causing loss of missile control. Trees or heavy brush can detonate an ATGM warhead.
- Gunners must be highly trained. Threat ATGM gunners must simultaneously track both target and missile with an optical viewer, while flying the missile with a "joystick" on a control box.
- Missiles have a minimum range limitation. The missile has to fly about 500m after launch for the gunner to capture it in his viewer and accurately fly it to target.

SAGGER



- Because the missile is highly sensitive to course corrections, a sudden, violent turn or erratic speed and direction changes by the target will cause gunners to overcorrect and lose control of the missile.
- Since Threat ATGM's are very slow (12.5 seconds to fly 1,500m; 25 seconds to fly 3,000m), there is ample time for the target to react if it observes the missile firing.
- The Swatter is susceptible to electronic countermeasures.



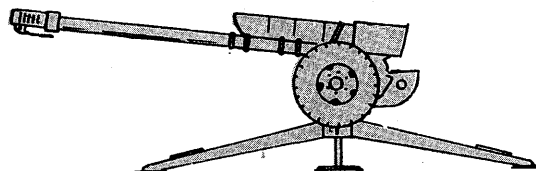
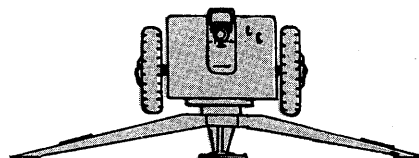
Suggestions. To defeat Threat ATGM's:

- Move, using terrain properly.
- Fire from hull-down positions.
- Avoid geometric formations.
- Use overwatch to move. When a Threat missile firing is observed, overwatch vehicles should fire quickly to kill or distract the ATGM gunner.
- Make abrupt speed and direction changes (zigzag) when moving.
- Use artillery and mortar suppressive fires to neutralize, distract or force the gunner inside a vehicle where his field of view is limited.
- When a Threat missile firing is observed, move immediately to cover. This includes simply backing down from a hull-down firing position to a turret-down position.

ARTILLERY

Threat forces are equipped with a variety of excellent artillery weapons, from light and heavy mortars and conventional field guns and howitzers to multiple rocket launchers (MRL's) and missiles—all capable of firing conventional, nuclear, biological, and chemical rounds. Large numbers of Threat artillery weapons with extended ranges can be used against US cavalry formations. MRL's can deliver saturation fire, while conventional artillery fires against targets of opportunity and preselected targets.

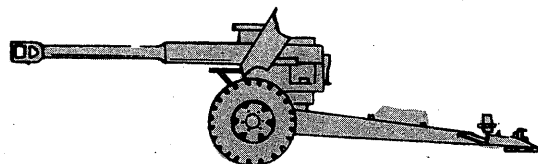
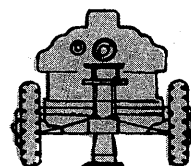
The most common field pieces are 122-mm and 152-mm *towed howitzers*. The maximum range of the 122-mm howitzer is 15,300m and its rate of fire is 7-8 rounds per minute.



122-MM HOWITZER D-30

The 152-mm howitzer's maximum range is 18,500m and its rate of fire is 5 rounds per minute. The range of the largest towed howitzer, the 203-mm, is 29,500m.

Threat forces use *towed field guns* of various calibers. The largest of these guns is 130-mm with a range of over 27,000m.



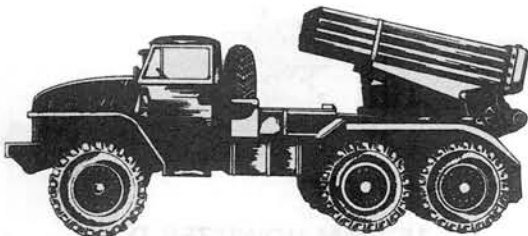
152-MM HOWITZER D-20

**122-MM****152-MM**

Threat forces have recently been equipped with two new mobile artillery pieces: 122-mm and 152-mm self-propelled (SP) guns. The 122-mm SP gun is mounted on a tracked carriage which resembles the hull of the BMP personnel carrier and running gear of the PT-76 tank. The gun is mounted in a turret with compartments and hatches for both gunner and commander. Not much is known about the 152-mm SP.



Threat forces usually use the multiple rocket launcher (MRL) for area coverage. These weapons are available in many sizes, but the most common is the 122-mm truck-mounted launcher, which can fire up to 40 rounds simultaneously up to 20,000m.

**122-MM ROCKET LAUNCHER BM-21**

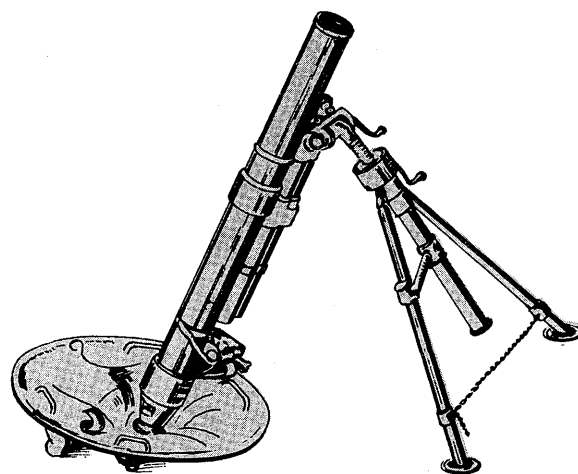
Threat mortars have the same basic support missions as US mortars. Threat mortars are almost the same as those found in US forces. One of the largest is the 120-mm mortar with a range of 5,700m.

Strengths. The main strengths of Threat artillery are:

- *Extended ranges.* Many types of weapons provide a capability for effective indirect fire support.
- *Variety of ammunition* to attack different types of targets. In addition to indirect fire, Threat artillery can be attached to frontline units to provide heavy firepower against terrain, bunkers, and strongpoints. Weapons most frequently used in this role are 122-mm and 152-mm howitzers and 122-mm multiple rocket launcher. All artillery pieces up to and including the 152-mm have special armor-piercing projectiles for direct-fire against tanks.

Weaknesses. Threat artillery has three major weaknesses:

- Unless preplanned, Threat artillery can't be massed or shifted as quickly and efficiently as US artillery.
- Mainly towed, Threat artillery has limited cross-country mobility, and requires more time to change firing positions.
- Lacking overhead cover, towed Threat artillery is vulnerable to indirect suppressive fire.



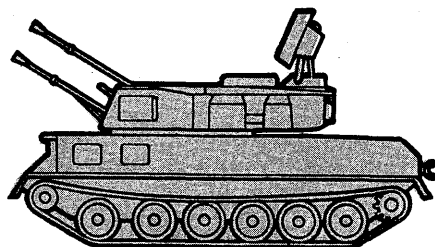
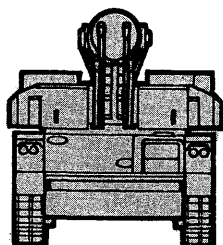
120-MM MORTAR

Suggestions. To defeat Threat artillery, remember:

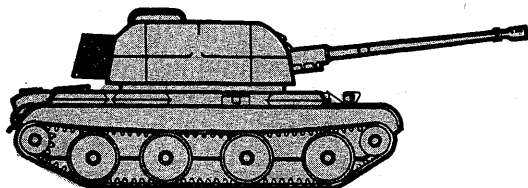
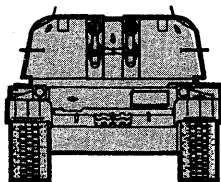
- To counter Threat artillery, button-up and use hull-down positions when stationary and covered and concealed routes when moving. Use suppressive fires on enemy guns and gunners.
- Threat artillery positions will normally be encountered immediately to the rear of hostile defensive positions. The destruction of artillery is important because the enemy will try to use both direct and indirect fire.
- Towed artillery is vulnerable to attack from the flanks or rear. When caught moving, it is at an extreme disadvantage.

ANTIAIRCRAFT ARTILLERY AND MISSILES

Antiaircraft Artillery. The Threat Army has been reluctant to replace its conventional antiaircraft guns with more sophisticated surface-to-air missile (SAM) systems. Antiaircraft artillery weapons range in caliber from 12.7-mm to 130-mm. Present emphasis is on automatic, rapid-fire, highly mobile guns and missile systems designed to provide field armies with effective low-level air defense.



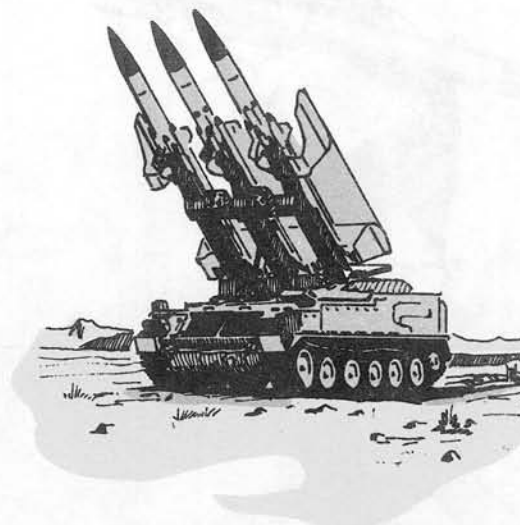
ZSU-23-4. The ZSU-23-4 is a self-propelled system mounting four 23-mm guns with a completely integrated fire control system. The ZSU-23-4 is mounted on a light tracked chassis. Its onboard radar is used for both target acquisition and target tracking. Its two guns fire 800-1,000 rounds per minute each with a tactical antiaircraft range of 3,000m with radar and 2,000m without radar. It may be used against aircraft maneuvering to evade low- and medium-level surface-to-air missiles.



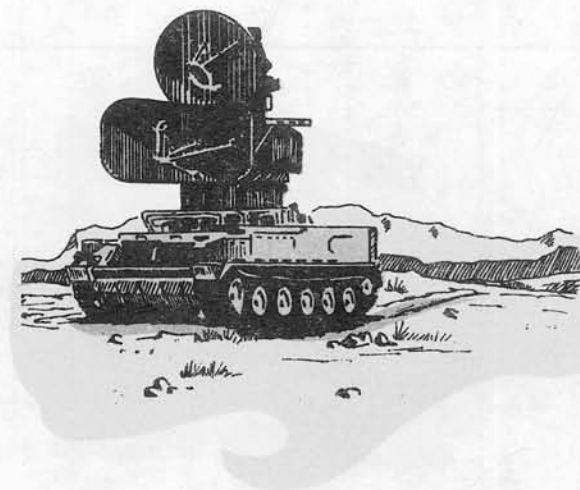
ZSU-57-2. The ZSU-57-2 is used by field air defense units in tank divisions. It consists of a modified T-54 tank chassis carrying a twin S-68 57-mm gun in a large, squarish, open top turret. The chassis has much less armor than the T-54 tank and the running gear uses only four roadwheels. It weighs 28.1 tons. The turret is also identifiable by the large basket on the rear where empty cartridge cases are stored. It can fire 105-120 rounds per minute per gun with a tactical antiaircraft range of 4,000m.

Antiaircraft Missiles. Threat forces have developed a family of semi-mobile and mobile, crew-served air defense missiles for the tactical air defense of field armies.

SA-3 GOA. The SA-3 is a two-stage, solid-fuel, medium- to low-altitude, surface-to-air (SAM) guided missile. The ready missiles are transported in tandem on a modified truck, which is also used to help load them onto the launchers. A four rail launcher is also available with this system.

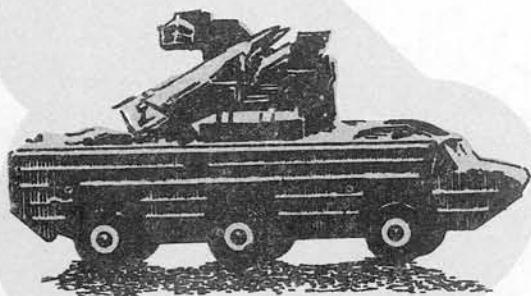


SA-6 GAINFUL. The SA-6 is a low-altitude, surface-to-air guided missile with a ceiling of 66,000 feet and a range of about 37km. The missile is deployed as part of a battery containing one *STRAIGHT FLUSH* fire control radar vehicle; loader vehicles, and four triple transporter, erector, and launcher vehicles. The launcher vehicles are tracked like all the vehicles in the battery, but have components of the ZSU-23-4 chassis. The launcher rails can be traversed 360°.





SA-7 GRAIL. The SA-7 GRAIL is a low-altitude, surface-to-air missile introduced in the late 1960's. It is a heat-seeking missile similar to the US Redeye. The SA-7 has a maximum range of about 2km and a maximum altitude of 10,000 feet. At least two versions of the SA-7 GRAIL exist.



SA-8 GRECKO. The SA-8 GRECKO is a highly mobile, amphibious SAM system capable of rapid movement with ground forces. This three-axle, amphibious vehicle carries four missiles. Each vehicle is equipped with an acquisition and tracking radar plus two guidance radars. It also contains an electro-optical tracker, probably television. One carrier can launch two missiles at the same target, with each guided on a different frequency. The missile has a minimum effective altitude of 150 feet and a maximum altitude of about 20,000 feet.

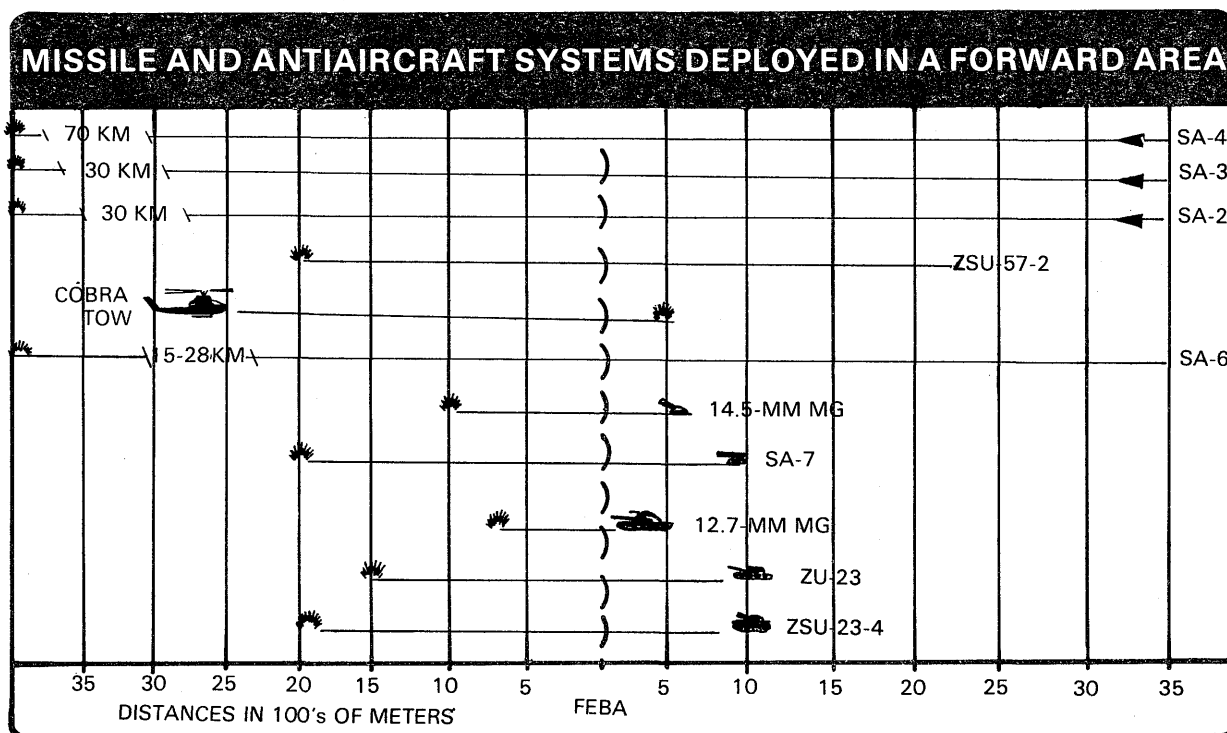


SA-9 GASKIN. The SA-9 GASKIN is also a heat-seeking missile system similar to the SA-7, but the SA-9 is longer and heavier with a larger warhead and greater range. The missile is carried and launched from quadruple canister launchers mounted on a modified BRDM-2 armored reconnaissance car.

The following antiaircraft weapons table represents current systems in service in Threat countries. The weapons are considered to be a cross section of their capability. But by no means all inclusive.

AIR DEFENSE ARTILLERY WEAPONS SYSTEMS

WEAPON SYSTEM	RANGE AND CAPABILITY	GUIDANCE	ASSIGNED
S-60, 57-mm antiaircraft gun. Mobility: Towed.	Range: 6,000m. Gun can be elevated from -2° to $+87^{\circ}$ vertically and traversed 360° .	Radar and optical-mechanical.	Antiaircraft regiment of a tank division and a motorized rifle division.
ZSU-57-2, 57-mm antiaircraft gun. Mobility: Self-propelled with fully tracked chassis.	Range: 4,000m. Gun can be elevated from $+2^{\circ}$ to $+87^{\circ}$ vertically and traversed 360° .	Optical-mechanical.	Air defense units in a tank regiment of a tank division and motorized rifle division.
ZSU-23-4, 23-mm antiaircraft gun. Mobility: Self-propelled with fully tracked chassis.	Optical range: 2,500m. Radar range: 3,000m. Gun can be elevated from $+8^{\circ}$ to $+87^{\circ}$ vertically and traversed 360° .	Radar and optical-mechanical.	Air defense units in a tank regiment, a motorized rifle regiment of a tank division, and a motorized rifle division.
ZU-23, 23-mm antiaircraft gun. Mobility: Towed on two-wheel carriage.	Range: 2,500m. Gun can be elevated from -10° to $+90^{\circ}$ vertically and traversed 360° .	Optical.	Air defense units in a motorized rifle regiment of a tank division and a motorized rifle division.
ZPU-4, quad-mounted 14.5-mm antiaircraft machinegun. Mobility: Towed on four-wheel carriage.	Range: 1,400m. Gun can be elevated from -8.5° to $+90^{\circ}$ vertically and traversed 360° .	Optical.	Air defense units in a motorized rifle regiment of a tank division and a motorized rifle division.
12.7-mm machinegun. Mobility: Mounted on combat vehicles.	Range: 1,000m.	Optical.	Platoon level weapon.



Strengths. Major strengths of the Threat anti-aircraft weapons are:

- **Versatility.** Weapons extend across a broad spectrum, ranging from small arms to anti-aircraft artillery and surface-to-air missiles. Anti-aircraft guns can also be used against ground targets.
- **Mobility.** Threat anti-aircraft weapons can move with ground elements and provide continuous air defense.

Weaknesses. Threat anti-aircraft weapons lack cover for crewmen, weapons, fire control systems, and radar. All can be destroyed or suppressed.

Suggestions. To fight and survive:

- **Fly the terrain.** Fly as close to the ground as pilot skill, navigation aids, and man-made or terrain obstacles permit.

- **Suppress.** Use a wide variety of means, including electronic countermeasures.
- **Carefully plan your mission** to take maximum advantage of terrain and suppression.
- **Remain unmasked no longer than 30-35 seconds** to engage targets.
- **Engage targets at maximum ranges (3,000-3,500m).**

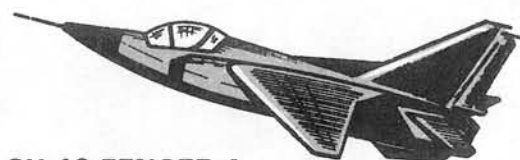
REMEMBER

AA WEAPONS ARE NEVER EMPLOYED SINGLY. IF ONE FIRES ON YOU, ANOTHER IS ABOUT TO.

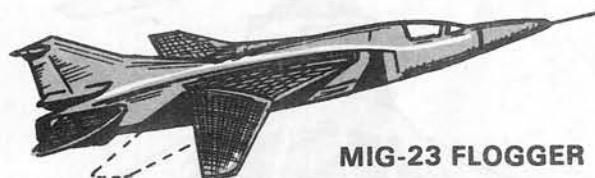
AIRCRAFT

Threat high-performance tactical fighters provide close air support and perform reconnaissance for Threat armored forces. Threat forces also have attack and utility helicopters.

Tactical Air Support. Threat tactical air support is controlled by ground force commanders. Initially, Threat tactical air attempts to gain air superiority. It then engages targets beyond artillery range, reinforces artillery fires, and attacks targets of opportunity. Often artillery preparation includes coordinated tactical air sorties.

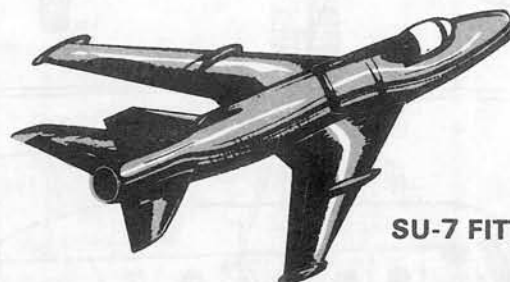


SU-19 FENCER A



MIG-23 FLOGGER

The principal aircraft which may be encountered are the SU-19 Fencer A variable-geometric-wing fighter-bomber designed specifically for ground-attack missions; the MIG-23 Flogger with a ground-attack capability in addition to serving as a fighter-interceptor; the SU-7 Fitter B improved ground-attack aircraft; and the MIG-21 Fishbed, an older all-weather, single-seat fighter. Their armament includes rockets, guns, and bombs.



SU-7 FITTER

	SPEED	COMBAT RADIUS*
	MACH	NM
FENCER A	2 (+)	N.A.**
FISHBED	2 (+)	540
FITTER	2 (-)	290
FLOGGER	2.3	710



MIG-21 FISHBED

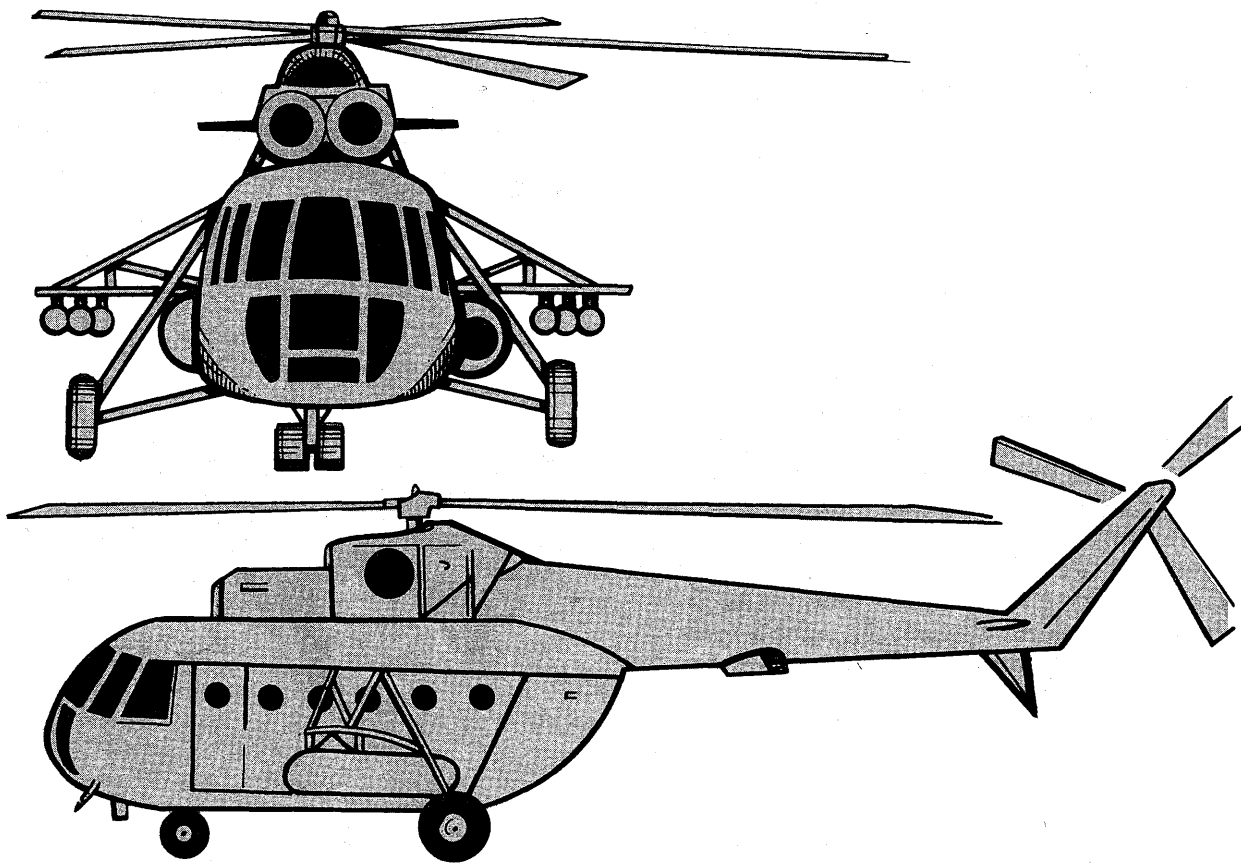
*With external fuel tanks.

**Not available.

Helicopters. Threat tactical employment of helicopters has greatly increased during the past few years. The Threat now employs cargo, lift, and attack helicopters in greater numbers than ever before. The attack helicopter now being deployed is the MI-24 Hind-D; however, the MI-8 Hip-E may also be employed in an attack role.

MI-8, HIP-E

The MI-8 Hip-E has six 32-shot 57-mm rocket pods, a nose-mounted 12.7-mm machinegun, and four rack-mounted ATGM's. It is currently the most heavily armed helicopter in the world.



12.7-mm A12.7P MACHINEGUN
ESTIMATED 1700-2000 ROUNDS
OF AMMO
RATE OF FIRE: 950 shots/MINUTE

32-SHOT 57-mm ROCKET PODS
PODS PER SIDE: 3
ROCKETS PER SIDE: 96
TOTAL ROCKET LOAD: 192

ANTITANK GUIDED
MISSILE
(2 PER SIDE)

MI-24 HIND-D

The Hind-D mounts four 57-mm rocket pods, a Gatling-type machinegun in the nose turret, and four ATGM's. It has an estimated maximum speed of 312 kmph (170 knots) and a combat radius of 250 km.

The distinguishing feature of the Hind-D is the nose modification which incorporates two tandem bubble canopies and a chin-mounted gun turret.



The Hind-D maintains the same troop-carrying and external weapons stores capability as the Hind-A. Each pylon has two 32-shot rocket pods and two launch rails for antitank guided missiles.

THREAT TACTICS

OFFENSE

Threat forces attack in mass, normally in two echelons, and use a tank-heavy reserve. Threat forces try to mass so that they have a 3-to-1 advantage in tanks, artillery, and infantry. Threat attack tactics consist of penetrating forward positions, destroying the enemy in the main battle areas, seizing deep separated objectives to trap and destroy the defender, and continuing the advance. A typical attack scenario is:

Preparation. The attack begins with a massive artillery preparation to destroy all known and suspected defensive positions. This is often coordinated with tactical air sorties.

Attack. A tank-heavy spearhead force penetrates the defense, and succeeding echelons overwhelm the opponent.

At the time of penetration, Threat airborne/airmobile units are inserted to isolate parts of the defensive battle position, engage reserves, and cause widespread confusion. This Threat force is equipped with "suitcase" antitank guided missiles to destroy armored vehicles from the rear.

After penetration, tank-heavy reserves are sent through the breach in defenses to maintain the momentum of attacking echelons, link up with air launched units, complete destruction of the defending forces, and continue the attack.

See chapter 6 for greater detail of Threat offensive tactics.

DEFENSE

Threat forces defend only as a temporary measure to gain time to continue the attack. Defense in depth is their key to defense planning. A series of security and defensive zones, heavily supported by artillery and antitank weapons, wear down and destroy the attacker. Dummy positions are constructed to confuse the attacker. Tank-led counterattacks are directed against penetrations.

Security Zone. US cavalymen advancing against a Threat force first encounter the defensive security zone. This zone contains light reconnaissance tanks, scout vehicles with antitank guided missiles, infantry, and minefields—all supported by long range artillery and aircraft fires. The security zone is designed to harass and slow the attacker and make him deploy.

Main Defensive Belt. Reaching the main defensive zone, the attacker finds a series of battalion-size interlocking positions supported by extensive artillery. This zone will be strong in antitank weapons. Every man and weapon still available to the Threat try to stop and destroy the attacker. The Threat strong points force US units to deploy into areas designed for counterattacks by tank reserves. Here the Threat intends to destroy the attacking force.

NIGHT FIGHTING

Threat forces do not stop at night, but continue to operate using night vision devices. They consider darkness an advantage which must be seized. Most Threat night vision devices are infrared, and include weapon sights, surveillance devices, driving aids on all vehicles, sniper scopes, intrusion alarm devices, and metascope.

Threat night weapon sights for snipers and machinegunners give them a night range of about 300-400m. Artillery weapons are equipped with devices enabling night vision out to 800m for 57-mm guns and 1,000m for 122-mm guns. Tank gunners using infrared searchlights can see out to 1,000m directly in line with the main gun, but not to the sides. The tank commander has a separate infrared searchlight which allows him to look independently of the gunner to ranges up to 500m.

Observation posts can be equipped with ground-mounted infrared searchlights and telescopes with a night vision range of about 1,300m.

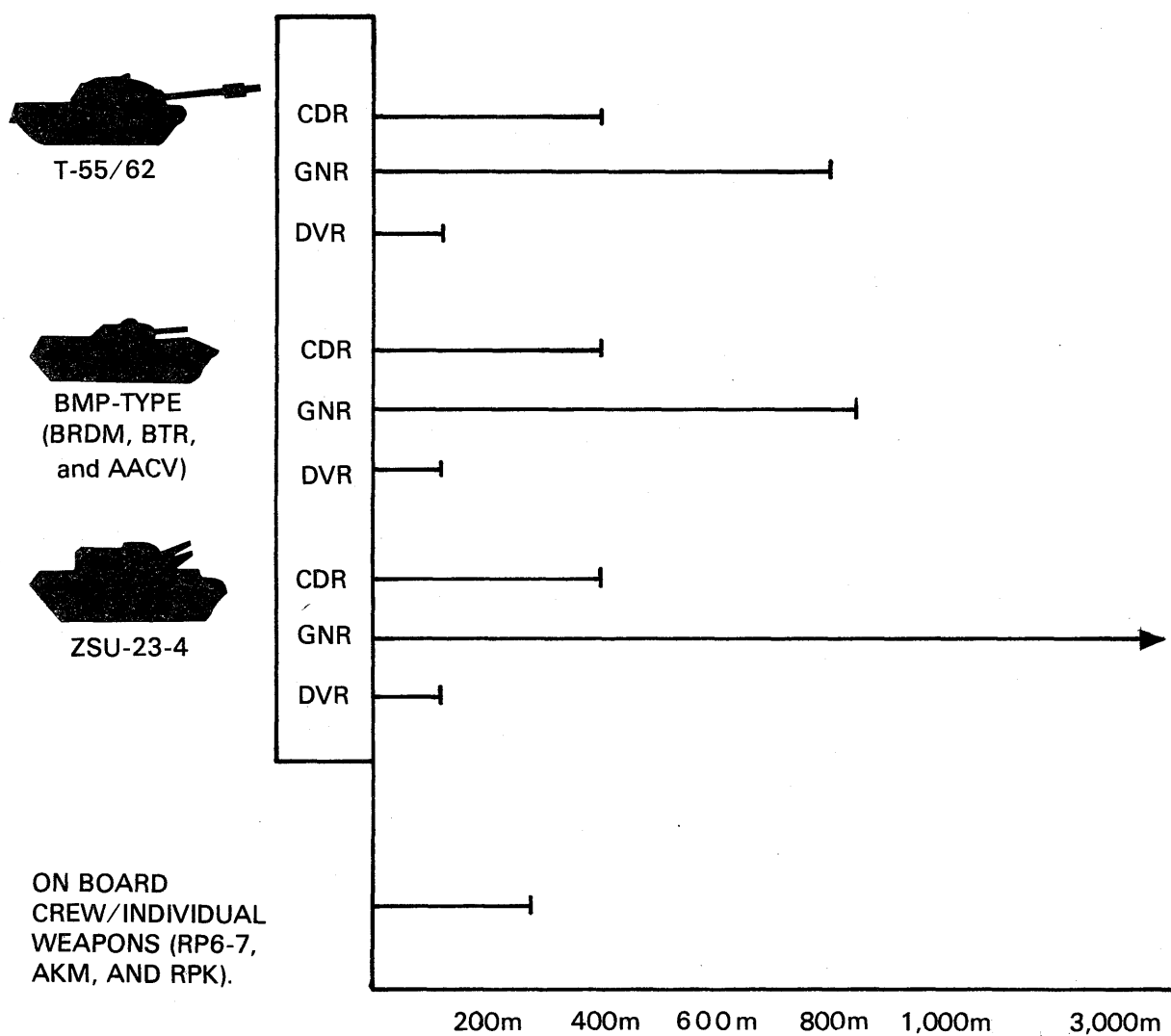
THREAT NIGHT VISION CAPABILITIES

		DEVICE	RANGE	SOURCE
T-54/55 T-10	Commander	TKN-1/3	400m	Active ir
	Gunner	TPN-1-22-M	800m	Active ir
	Driver	TVN-1	40m	Active ir
T-62	Commander	TKN-3	400m	Active ir
	Gunner	*TPN-1-22-M	800m	Active ir
	Driver	TVN-3	40m	Active ir
BMP BRDM BTR AACV	Commander	TKN-1/3	400m	Active ir
	Gunner	*TPN-1-22-M	800m	Active ir
	Driver	TVN-3	40m	Active ir
ZSU-23-4	Commander	TKN-1	400m	Active ir
	Gunner	Autotrack	3,000m	Radar
	Driver	TVN-1	40m	Active ir

*SOME T-62'S AND BMP-TYPE VEHICLES ARE BEING EQUIPPED WITH THE IPN 22M1 PASSIVE NIGHT SIGHT AS A REPLACEMENT FOR TPN 1-22-M. THE SIGHT IS BELIEVED TO HAVE A RANGE BETWEEN 700 AND 900M.

As seen in the following table, night observation equipment organic to both tank and motorized infantry units makes possible the full integration of all types of combat weapons/vehicles into a combined arms unit without harming their night operation capability.

THREAT NIGHT TARGET DETECTION AND ENGAGEMENT CAPABILITY



SUMMARY

The Threat, with its vast numbers of manpower and variety of powerful weapons, can be overcome only by a US Army that is knowledgeable in enemy armament and tactics and has trained to defeat them. Cavalry should always keep in mind the Threat's strong and weak points, its characteristics and composition.

- The Threat soldier is tough and effective on the battlefield. He is often highly motivated and will endure great hardship.
- Threat weapon systems are highly mobile; nearly all their weapons are mounted on wheels or tracks. These systems also complement each other, working well together and providing overlapping fields of fire.
- Threat armored vehicles, though equipped with highly lethal weapon systems, can be suppressed and defeated. Cavalry should aim at these vehicles' most vulnerable points and take advantage of tank blind areas and dead spaces.
- Threat antitank weapons are lethal and effective but can be evaded, suppressed, or destroyed. Tanks should make abrupt high-speed changes in direction and speed to dodge Sagger's; fire placed in the area of the SPG, RPG, and Sagger launcher will kill or drive the gunner away.

PREPARING FOR COMBAT OPERATIONS

In order to fight it is necessary to prepare. Generally these preparations include:

- Receiving and analyzing missions and tasks.
- Preparing and issuing the necessary plans and orders.
- Organizing for combat.
- Executing and supervising execution of whatever orders are issued.

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PREPARING FOR COMBAT OPERATIONS

TROOP LEADING PROCEDURES

Troop leading procedures are the process by which a commander issues the necessary instructions to his subordinates so that the commander can accomplish his assigned mission. The lower the echelon, the more simple, direct, and rapid is this process. Nevertheless, all the steps should be taken even if they are taken in a matter of seconds. In other words, the troop leading steps should be an instinctive and automatic way of

thinking for all commanders. Once the battle starts, subsequent orders and responses must be fast, effective, and simple. This requires teamwork. It also requires commanders who can turn a mission-type order without detailed instructions into action to support the plan of the next higher commander. Elaborate troop leading procedures are not permissible if they reduce the responsiveness of the force. The eight steps to troop leading are:

- | | |
|----------------|--|
| STEP 1. | RECEIVE THE MISSION. |
| STEP 2. | ISSUE A WARNING ORDER. |
| STEP 3. | MAKE A TENTATIVE PLAN TO ACCOMPLISH THE MISSION. |
| STEP 4. | INITIATE THE NECESSARY MOVEMENT SEQUENCE. ★ |
| STEP 5. | RECONNOITER. |
| STEP 6. | COMPLETE THE PLAN. ★ |
| STEP 7. | ISSUE ORDERS. |
| STEP 8. | SUPERVISE AND REFINE. ★ |

These steps are not rigid. They can be modified to fit mission and situation. Some steps are often taken at the same time. Others

are considered throughout the operation when there is sufficient time.

STEP 1. RECEIVE THE MISSION.

Commanders may receive a mission in either an oral or written operation order (OPORD) or a fragmentary order (FRAGO). Upon receiving an order, the leader analyzes his mission and plans the use of available time.

STEP 2. ISSUE A WARNING ORDER.

A commander issues a warning order by telling his subordinates the mission, time it starts, and where the actual order will be issued. This will permit the best use of time available to plan and prepare. In a cavalry unit, a warning order is usually issued orally through the chain of command. All personnel must be kept informed of what they are to do and why they are to do it.

STEP 3. MAKE A TENTATIVE PLAN.

The commander should make a tentative plan of how he intends to accomplish his mission. Regimental and squadron commanders may make fairly formal mental estimates, for they normally have the training and experience, and a sufficiently complex mission to warrant this. When time is short and the mission uncomplicated, they may quickly produce their tentative plan. Troop and company commanders should have uncomplicated missions, and because their planning time is usually limited they too quickly produce tentative plans. Each commander knows his own unit situation, knows as much about the enemy as he can under the circumstances, knows the mission and what it requires, and applies all of this to the terrain in the assigned area. The tentative

plan he develops is the basis for coordination, unit movement, reorganization (if any), and reconnaissance.

STEP 4. ★ INITIATE THE NECESSARY MOVEMENT SEQUENCE.

The commander has many important matters on his mind at this point. Often the driving consideration is the absolute necessity for the proper use of available time. He must be ever mindful that his subordinate leaders also need time. The commander must reconnoiter to verify or modify his tentative plan; the unit may be required to move, and it may need reorganization for the tasks at hand. Subordinate leaders must also reconnoiter and plan, and crews and squads must ready their vehicles and adapt their weapons to the ground. All these things must be done almost at the same time, or at least with minimum loss of time. The commander must have a standing operating procedure. He must require practice until it can all be done smoothly, even when fragmentary orders require sudden mission changes, orders are received while moving, or any of the many situations common to cavalry operations. The ability to respond immediately to new mission requirements is one of the hallmarks of cavalry.

When the commander is called to receive an order he should take with him some other person of authority who can return to the unit to issue the warning order and move the unit, if necessary. The commander must decide instantly when and where he will issue the final order and convey this to his subordinates. At regiment and squadron level this other person can be the S3 or executive officer. At troop and company level, he is often the first sergeant. Whatever the system, it must work, for mission accomplishment often depends upon it.

STEP 5. RECONNOITER.

In order to move efficiently in areas that may or may not contain enemy units, and to maneuver effectively against enemy attackers or defenders, the commander must adapt his forces to the terrain to maximize their capabilities and minimize their vulnerabilities. Personal reconnaissance of as much of the assigned area as possible permits the commander to verify that his tentative plan is satisfactory or cause him to make minor modifications to that plan. Regimental commanders rarely have time to see the whole area; they may not see it at all. Squadron commanders are more likely to see their areas, and troop commanders must have the opportunity to see theirs. If the area can't be completely reconnoitered, due to distance or enemy presence, then detailed plans can be made only for that part which can be seen. Instructions for later actions must be given in general terms and confirmed or changed as the terrain is revealed during movement.

STEP 6. COMPLETE THE PLAN.

As a result of reconnaissance, the commander adds detail to his tentative plan, and he may even alter it. As the time for issuing the actual order draws near, the commander quickly reviews his concept and identifies specific tasks for all his subordinate units.

STEP 7. ISSUE ORDERS.

Most orders are issued orally, and if the issuing commander has conducted a reconnaissance, he usually issues orders from a vantage point in the assigned area. This permits him to point out particular terrain features on the ground as well as on a map, and eliminates time which might be wasted in driving back to a command post only to speak to subordinates who then would drive forward to reconnoiter. Regimental and squadron commanders may issue overlays

with their orders or they may, like troop commanders, only provide subordinates the opportunity to copy graphic control measures from the commander's map onto their own. If the unit is moving or already involved in an operation, orders may be issued over radio, by messenger, or face to face.

STEP 8. SUPERVISE AND REFINE.

Commanders (and staffs) must supervise to ensure that all necessary preparations are made to conduct the operation. This includes coordination, organization, combat support, maintenance, movement, and any other required actions. Once the operation is under way, the commander must make sure the plan is followed and must issue fragmentary orders to modify or refine the operation as the situation develops. *Supervision is continuous and as important as issuing the order.*

ESTIMATE OF THE SITUATION

Plans and orders are the result of an estimate of the situation. Estimating the situation is a natural process used in all decision making. It may require a few seconds or a few hours, depending on the level of command, the complexity of the situation, the experience of the leader, and the time available. At high levels of command an estimate may be a highly complex, written document. Usually at regimental level and certainly at lower levels the estimate is mental, rapid, and follows a logical sequence. The commander must evaluate:

MISSION—What must be accomplished?

SITUATION—What and where are the enemy forces? What terrain is available and how can it be used? What forces are available?

COURSES OF ACTION—What general ways are there to use available forces to accomplish this mission?

ANALYSIS OF COURSES OF ACTION—What are the good and bad aspects of each general way?

COMPARISON OF COURSES OF ACTION—Which way is best in this situation?

DECISION AND CONCEPT—What will be the scheme of maneuver, organization, and plan for fire support?

OPERATIONS SECURITY

Throughout the planning, preparation, execution, termination, and post-operation phases of an operation, every effort must be made to maintain security. Operations security (OPSEC) is an integral part of planning and conducting unit training and day-to-day operations at all levels of command.

Unit S2's and S3's work together to develop OPSEC protective measures. There are four logical steps in the OPSEC planning sequence:

- Determine enemy capabilities for obtaining information about the operation.
- Determine what information obtained by the enemy can compromise the operation and when he would

need the information in order to react.

- Determine what actions taken by the regimental/squadron or its subordinate units before an operation, if known and analyzed by the enemy, would provide him with the information he needs.
- Determine what protective measures are necessary and where they must be implemented in order to maximize operations security. Some OPSEC measures are:
 - *Deception* is the actions taken to mislead the enemy regarding current or intended operations.
 - *Physical security* is the use of security forces, barriers, and anti-intrusion devices to deny enemy access to facilities, areas, equipment, materiel, and personnel in order to protect operational information or activities.
 - *Signal security* is the use of communications security techniques (communication codes, secure voice equipment, RATELO procedures) and electronic security techniques (radio silence, proper positioning of radars and antennas, etc.) to prevent the disclosure of operational information.
 - *Information control* is the control of written, verbal, and graphic information in order to prevent the disclosure of operational information.

ORGANIZATION AND ORGANIZATION FOR COMBAT

ARMORED CAVALRY REGIMENT

Organization. An armored cavalry regiment is normally assigned to corps headquarters and contains:

Headquarters and Headquarters Troop.

One Air Cavalry Troop.

★ One Attack Helicopter Company.

Three Regimental Armored Cavalry Squadrons.

One Engineer Company.

Components of regimental headquarters and headquarters troop and what they do are:

Regimental Headquarters. This consists of the regimental commander and principal staff personnel for command, control, and administration of the regiment. Their duties are set forth in FM 101-5.

Headquarters Troop.

- **Troop Headquarters** provides administrative, supply, maintenance of vehicles and armament, and massing for troop and regimental headquarters personnel.
- **Regimental Headquarters Section** provides personnel and some vehicles and equipment for staff sections.
- **ADA Section** provides four shoulder-fired air defense weapon teams for use in the regimental area (chapter 7).
- **Command Vehicle Section** provides two armored personnel carriers for the regimental command group. These vehicles also may be used to augment command post security.
- **Fire Support Element** coordinates and advises the commander on the use of indirect fires (chapter 7).
- **Liaison Section** provides liaison personnel for coordination and exchange of information.

- **Medical Section** provides medical aidmen and drivers for unit level medical support and evacuation for headquarters and headquarters troop and air cavalry troop. The section leader is also the staff medical advisor.

- **Scout Section** provides reconnaissance and security for the regimental command post or command group.

- ★ ● **Aviation Unit Maintenance Platoon (AVUM)** provides four utility and six observation helicopters for command and control. The transport section provides eight utility helicopters for troop transport, emergency supply, evacuation and liaison. The platoon has its own class III resupply and aircraft organizational maintenance capability.

- **Communications Platoon** operates the regimental message center, maintains headquarters communication equipment and operates a radio teletypewriter station.

- **Tactical Air Control Party (TACP) (Augmentation)** comes from the supporting tactical Air Force (chapter 7).

- **Air Cavalry Troop.** See page 3-17.

Note. (USAREUR only) Armored cavalry regiments do not have an air cavalry troop assigned by MTOE. The TOE 17-59, Support Troop (AIR), contains:

Headquarters.

Service Platoon (AVUM).

Scout Platoon.

Command and Control Section.

Logistical Support Section.

Attack Helicopter Company.

- ★ An attack helicopter company assigned to the regiment contains:

- Headquarters.
- Operations.
- Service Platoon (AVUM).
- Scout Platoon.
- Three Attack Helicopter Platoons.

For more information on organization for combat and employment of the regiment's attack helicopter company, see FM 17-50, Attack Helicopter Operations.

Regimental Armored Cavalry Squadron. See page 3-8.

Engineer Company. See page 7-12.

Organization for Combat. The regiment may be reinforced with maneuver battalions or task forces, air defense artillery, field artillery, engineer, military intelligence, Army Security Agency, signal, Army aviation, and combat service support units. Maneuver elements may be retained under regimental control or placed under one or more squadrons. Combat support unit employment is discussed in chapter 7. Combat service support unit combat organization and employment is discussed in chapter 8.

The regiment normally maintains unity of command and organizational integrity of squadrons, the air cavalry troop, and attached or supporting units by centralized planning and decentralized execution. Usually headquarters and headquarters troop is used tactically in two echelons: command posts (CP's) and trains. The regimental commander controls and coordinates operations using a tactical CP or main CP.

Tactical Command Post. During tactical operations, the commander usually operates forward of the main CP with a tactical CP sometimes called a command group. It contains the commander, staff officers of his choosing, communications facilities, and perhaps a small security force. As a mini-

mum, the tactical CP includes the S3, field artillery fire support officer, and air liaison officer. It is mounted in ground or aerial vehicles for movement to permit the commander to obtain on-the-spot knowledge and exercise personal leadership and control. Its location depends on the situation, the commander's personal desires, and need to maintain continuous communication with subordinate commanders and the main CP.

Main Command Post. The main CP contains a tactical operations center (TOC) and various headquarters and headquarters troop elements required for its support. The TOC is the hub of the main CP. It maintains communication and coordination with higher, lower, adjacent, and supporting units by receiving and forwarding reports on the tactical situation. It monitors and helps the commander coordinate operations in progress, simultaneously plans future operations and ensures liaison with higher and adjacent units. Its organization is flexible, depending in large measure on the commander's desires. The TOC normally includes the XO, the S2 and S3 sections, military intelligence and Army Security Agency elements, liaison personnel from attached and supporting units, a tactical air control party, and field artillery fire support element. The S3 is responsible for its functioning.

Also contained within the main CP is the headquarters of the headquarters and headquarters troop with elements of the maintenance section, communications platoon and the air defense section headquarters. Most, if not all, of the S1 and S4 sections are located in the trains. Normally, the S1 and S4 operate from the trains area. The main CP must be capable of frequent movement, operating on the move, and sustained 24-hour operations. The headquarters troop commander is responsible for overall functioning and security of the main CP. See appendix G for additional information concerning location, internal arrangement, and displacement of the main command post.

REGIMENTAL ARMORED CAVALRY SQUADRON

Organization. The regimental armored cavalry squadron contains:

Headquarters and Headquarters Troop.

Three Armored Cavalry Troops.

One Tank Company.

One Howitzer Battery (SP).

Squadron Headquarters. This consists of the squadron commander, primary staff officers, liaison officers, and the sergeant major for command, control, and administration of the squadron. Their duties are set forth in FM 101-5.

Headquarters Troop.

- *Troop Headquarters* performs the same functions as the troop headquarters of the regimental headquarters and headquarters troop (page 3-6).
- *Squadron Headquarters Section* performs the same function as the regimental headquarters section (page 3-6) and provides two armored personnel carriers for the squadron command group.
- *ADA Section* contains six teams and functions as its counterpart at regiment (page 3-6).
- *Fire Support Element* performs the same function as its counterpart at regiment (page 3-30).
- *Medical Platoon* operates the squadron aid station and provides a medical aid and evacuation team to each troop, howitzer battery, and tank company.
- *Communications Platoon* operates the squadron communications systems, provides limited message cen-

ter and messenger services, performs organizational maintenance on the signal equipment assigned to the headquarters troop, and provides secure backup radio teletypewriters.

- *Tactical Air Control Party (TACP) (Augmentation)* comes from the supporting tactical Air Force.
- *Maintenance Platoon* provides organizational maintenance, recovers and evacuates disabled ground vehicles, and manages repair parts for all squadron equipment except medical and signal.
- *Support Platoon* consolidates requests for, secures, and issues supplies, and transports the squadron's basic load of class III, class V, and supplies not issued.
- *Ground Surveillance Radar Section (Augmentation)* provides two teams, each with a medium range radar set. The section may be used intact or by teams (chapter 7).
- *AVLB Section* provides three bridge launchers. It may be used as a unit, or individual bridge launchers may be attached to armored cavalry troops or a tank company (chapter 7).

Armored Cavalry Troop. See page 3-10.

Tank Company. This company provides 17 main battle tanks for long range, high-velocity direct fire (FM 71-1).

Howitzer Battery (SP). This battery provides six 155-mm SP howitzers.

Organization for Combat. The regimental squadron may be reinforced with maneuver, combat support, and service units as is the regiment (page 3-7). Such reinforcement is usually accomplished by units one organizational size lower than provided a regiment. Whereas the regiment would be reinforced with one or more maneuver battalions or task forces, a squadron would normally receive a company or team. Combat support unit use is discussed in chapter 7. Combat service support unit combat organization and use is discussed in chapter 8.

The regimental armored cavalry squadron is normally used as part of its parent regiment, but may be attached to another regiment, a brigade, or higher headquarters. The squadron's mission and location, in relation to its parent regiment, are the determining factors. It may be used as organized, or it may be reinforced. Headquarters and headquarters troop use parallels

that of the regiment HHT in that the squadron operates two echelons: a main command post and trains.

Armored cavalry troops, tank company, and field artillery battery are used under control of the squadron. Helicopters, when available, should be used under control of the squadron; however, when the situation requires, they may be placed under control of the troop/company.

Specific missions may require temporary reorganization of one or more of the squadron elements. Normally at squadron level, this will involve cross-attachment of platoons between armored cavalry troops and tank company, or reinforcing tank and mechanized infantry.

Command control in the squadron parallels that of the regiment, differing only in scope of operations and level of command (page 3-7).

DIVISIONAL ARMORED CAVALRY SQUADRON

Organization. An armored cavalry squadron assigned to an armored or mechanized infantry division contains:

Headquarters and Headquarters Troop.

Three Armored Cavalry Troops.

One Air Cavalry Troop.

★ **Squadron Headquarters.** Headquarters components and their functions are similar to the regimental armored cavalry squadron headquarters (page 3-6).

Headquarters Troop. Headquarters troop components and their functions are similar to the regimental armored cavalry squadron headquarters troop (page 3-6) except:

★ The divisional squadron has no fire support element. Fire support coordination is provided by the artillery liaison party from the supporting artillery unit (chapter 7).

These sections are different:

- **Support Platoon.** In addition to supply and transportation sections, this platoon has a mess section with five mess teams, one for each troop of the squadron. Normally a team is attached to each troop for combat operations.
- **ADA Section.** This section has five teams (chapter 7).

Armored Cavalry Troop. See below.

Air Cavalry Troop. See page 3-17.

Organization for Combat. The divisional armored cavalry squadron may be used as organized, or reinforced as is the regimental armored cavalry squadron (page 3-9).

The divisional armored cavalry squadron is normally used under divisional control. The squadron, or one of its troops, may be temporarily attached to or placed under the control of a brigade.

Subordinate elements of the divisional armored cavalry squadron are organized for combat and used in the same manner as subordinate elements of the regimental armored cavalry squadron.

Command control in the squadron parallels that of the regiment, differing only in scope of operations and level of command (page 3-7).

Nonorganic fire support and trains use is discussed in chapters 7 and 8 respectively.

ARMORED CAVALRY AND CAVALRY TROOPS

Organization. Armored cavalry and cavalry troops are organized with three armored cavalry or cavalry platoons and a troop headquarters. The basic difference is that the armored cavalry troop is equipped with tracked vehicles, while the cavalry troop is equipped with wheeled vehicles. (Cavalry troops are organic to air cavalry squadrons of airborne and airmobile divisions.)

Troop Headquarters.

- **Headquarters Section.**
 - Command Control.
 - Administrative and Supply Functions.
 - Messing Functions. A mess section is organic to each troop/company/battery in the regimental armored cavalry squadron. Mess sections in the divisional armored cavalry

squadron are contained in the support platoon, but are normally attached to each troop during operations.

- **Maintenance Section** performs organizational maintenance, repair, and evacuation of all vehicles, weapons, and signal equipment.
- **Ground Surveillance Radar Section** provides medium range radar surveillance. It has two radar teams, each with one radar.

- ★ ■ **Mortar Section.** The three mortars are consolidated at troop level to ease training and maintenance, and to allow flexibility of employment. The preferred method of employment is with the section consolidated under the control of the senior mortar squad leader. However, when the width of the armored cavalry troop's area of responsibility becomes too

great to support all platoons from a central location, the troop commander may split the mortar section and place a mortar squad with each platoon. To provide responsive indirect fire support when the section is consolidated, the troop commander establishes a troop fire control net, set up by the FIST. The senior squad leader acts as the fire direction center (FDC) and has his radio on the fire direction net. One of the other vehicle radios is kept on the primary command frequency to monitor the tactical situation.

Armored Cavalry or Cavalry Platoon. See page 3-12.

★ **Organization for Combat.** Armored cavalry and cavalry troops normally maintain platoon integrity for reconnaissance and security operations. When conducting offensive and defensive operations, cavalry troops may be reinforced.

Tactical Command Post. The command post echelon consists of:

Troop Commander. The troop commander, accompanied by an artillery FO, normally operates from his command vehicle. The troop commander locates where he can best influence the situation. Most frequently, this will be immediately behind the lead element, on terrain favorable for com-

munication, observation, and control. The commander must not become so engrossed in a single platoon action that he loses control of the overall troop mission.

★ **Command Post.** The troop CP is organized around the troop headquarters' armored personnel carrier, or wheeled vehicle in the cavalry troop, and is supervised by the executive officer or first sergeant. It monitors and helps coordinate operations and sends reports to higher headquarters. The CP is located in a covered and concealed position which facilitates communications with the troop commander, the platoons, the squadron main CP or other CP's with which coordination is required (appendix G).

★ **Ground Surveillance Radar Section.** The ground surveillance radar section may be used under troop control, or the section or a radar team (each team has one radar) may be attached to a platoon. If mission or terrain conditions do not permit locating the radar near a platoon, it may be necessary to assign scouts to provide security (chapter 7).

★ **Fire Support Team (FIST).** The personnel and equipment that make up the FIST provide a responsive and flexible team at the troop level. All FIST's are capable of employing one or more platoon forward parties. The Armor/Cavalry FIST consists of a FIST Chief (LT), a Fire Support SGT (E6), a Fire Support SP Driver (E4) and two radiotelephone operators (assistant FO's, E3). For more information, see TC 6-20-10.

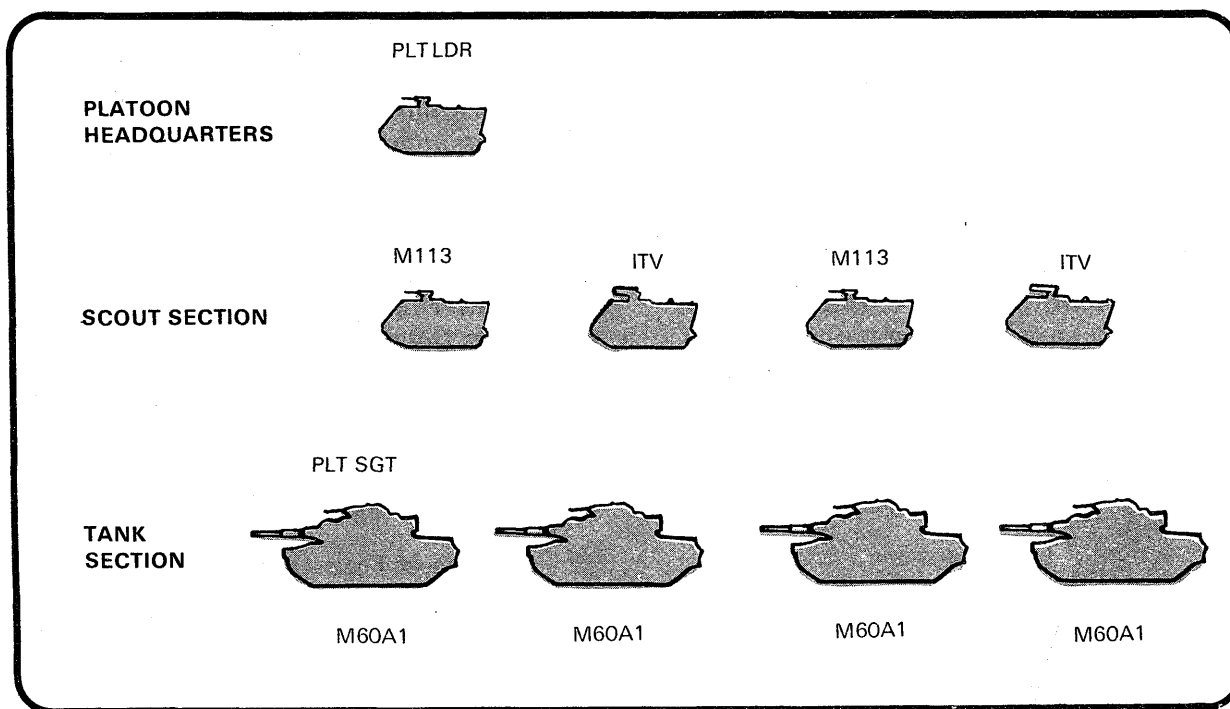
Trains. An armored cavalry or cavalry troop will most often organize trains as described in chapter 8.

ARMORED CAVALRY AND CAVALRY PLATOONS

Organization. The armored cavalry platoon is the basic maneuver element of an armored cavalry troop. The cavalry platoon is the basic maneuver element of the cavalry troop organic to airborne and airmobile

divisions. The basic difference is the cavalry platoon has wheeled instead of tracked vehicles.

Components of platoons and what they do are:



Platoon Headquarters. The platoon leader is mounted in a scout vehicle with a crew of three: driver, senior scout (vehicle commander), and a scout observer. The platoon leader deploys and *controls the platoon* within the troop commander's concept of the operation. Armored cavalry platoon leaders usually cannot see all of their platoon at one time. Therefore, they must learn to manage their assets; give thorough, well thought-out orders; and anticipate that they and their men may have to make independent decisions at critical times.

Scout Section (Two Scout Squads). Scouts are the basic information gathering element of the platoon. They collect and report information, conduct patrols, prepare or destroy obstacles, and participate in offensive and defensive actions when directed by the platoon leader. To perform their mission, *the scouts must frequently dismount* to reduce the chances of being detected.

SCOUT SQUAD

SSG (SQD LDR)
SP4 (DRIVER)
PFC (SCOUT)
PFC (SCOUT)



M113

SGT (ASST SQD LDR)
SP4 (DRIVER)
PFC (SCOUT)
PFC (SCOUT)
PFC (SCOUT)



ITV M113

Tank Section. The tank section is composed of four main battle tanks. The tanks provide rapid, high velocity antiarmor fires. The section is also prepared to help the scout section gather and report information.

SFC (PLT SGT)
SP5 (GUNNER)
PFC (LOADER)
SP4 (DRIVER)



M60A1

SSG (TK CDR)
SP5 (GUNNER)
PFC (LOADER)
SP4 (DRIVER)



M60A1

SSG (TK CDR)
SP5 (GUNNER)
PFC (LOADER)
SP4 (DRIVER)



M60A1

SSG (TK CDR)
SP4 (GUNNER)
PFC (LOADER)
SP5 (SR DRIVER)

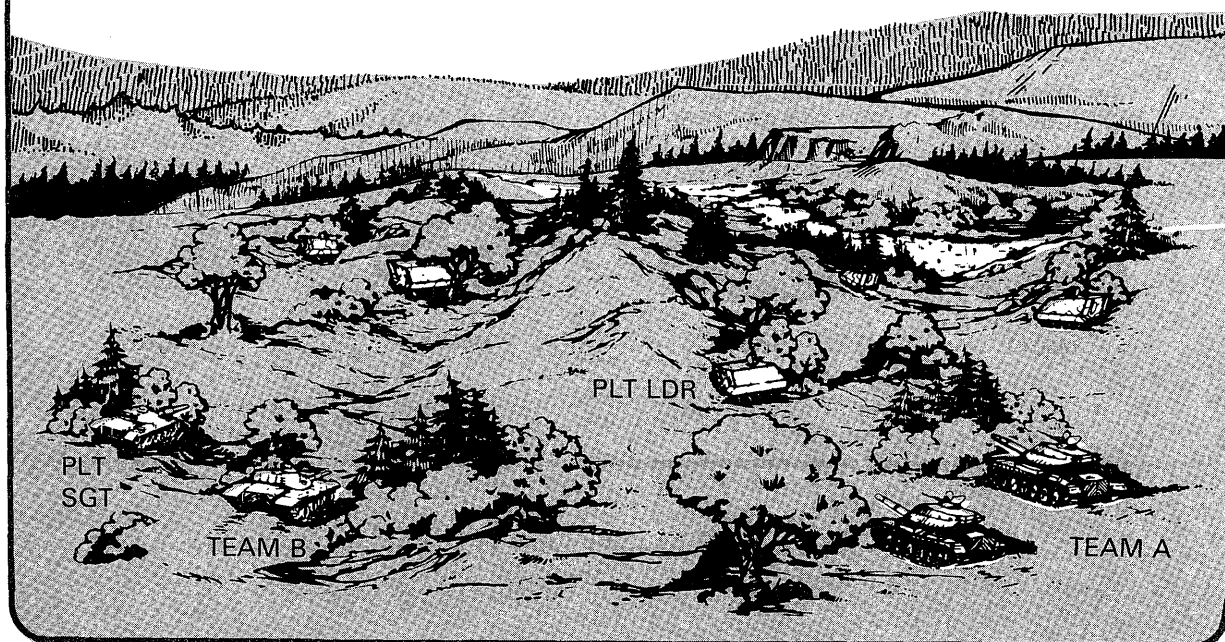


M60A1

Organization for Combat. An armored cavalry platoon leader organizes his platoon to accomplish the mission based on his assessment of the enemy in his area, the terrain he must operate over, the men and equipment he has available, and the mission he must perform. Therefore, the organization for combat of a particular platoon may differ from those depicted here or from the formation used by an adjacent platoon. Whenever possible, scouts are employed in pairs.

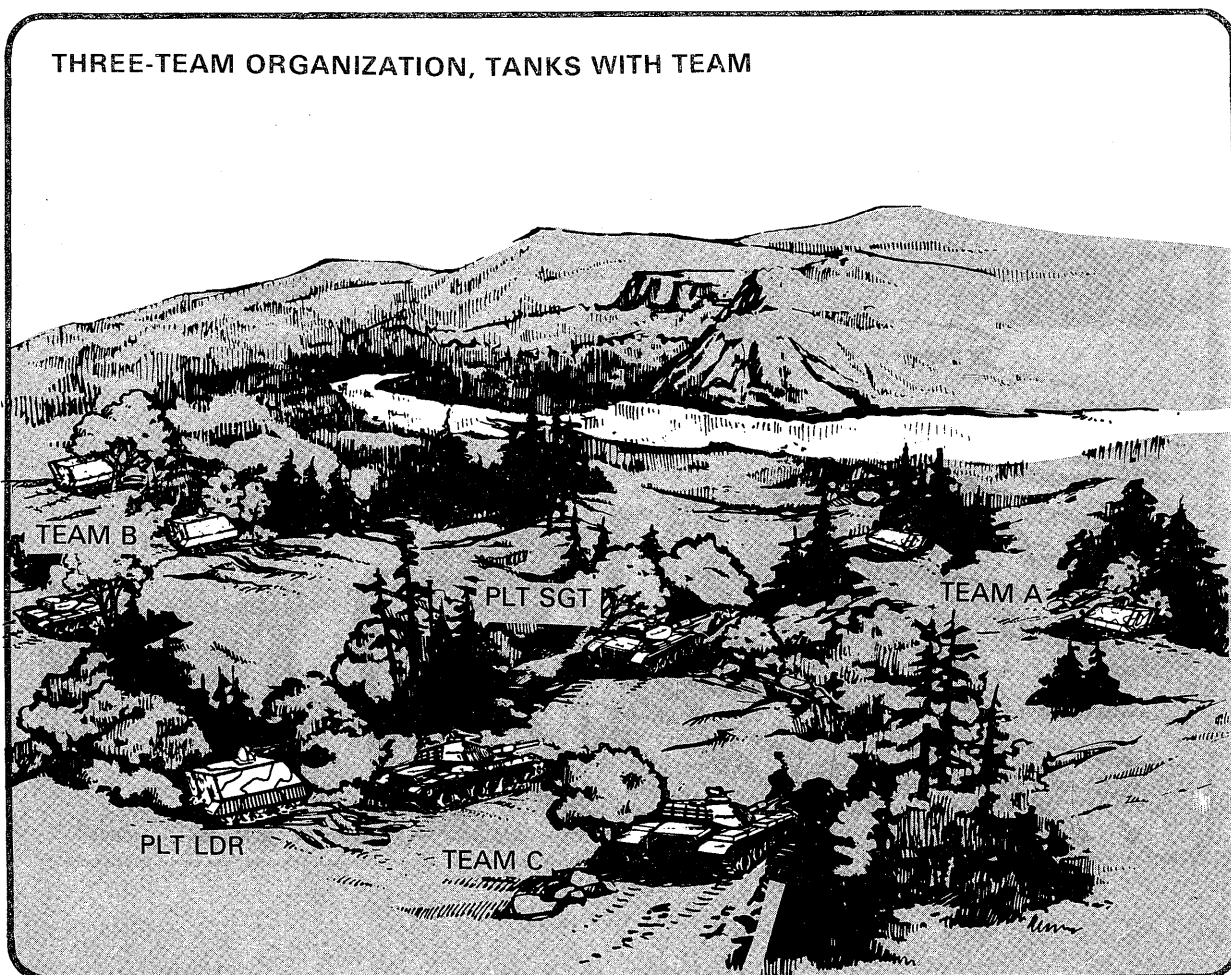
Two-Team Organization. Normally, an armored cavalry platoon will organize into two teams. This readily accommodates mission accomplishment, eases mutual support, and enhances command and control. Team A consists of one scout squad and two tanks and is controlled by the platoon leader from his scout vehicle. Team B consists of one scout squad and two tanks, controlled by the platoon sergeant from his tank.

TWO-TEAM ORGANIZATION



Three-Team Organization. Another method of organizing the platoon for combat is in three teams. There are two basic versions of the three-team concept. One is with tanks in each team. This organization is useful when the area to be covered is large such as a reconnaissance in zone, when the terrain is open, or when the enemy situation indicates the necessity of tanks being employed with the scouts. Team A, led by the platoon sergeant, consists of one scout squad and one tank. Team B is organized the same as Team A, but is led by an NCO other than the platoon sergeant. Team C is the platoon leader and the remaining two tanks. The other version is with the tanks consolidated. This method is useful when the platoon is occupying a battle position or the zone to be covered in a reconnaissance is narrow. Teams A and B each consist of a scout squad. Team C is the four tanks and the platoon leader.

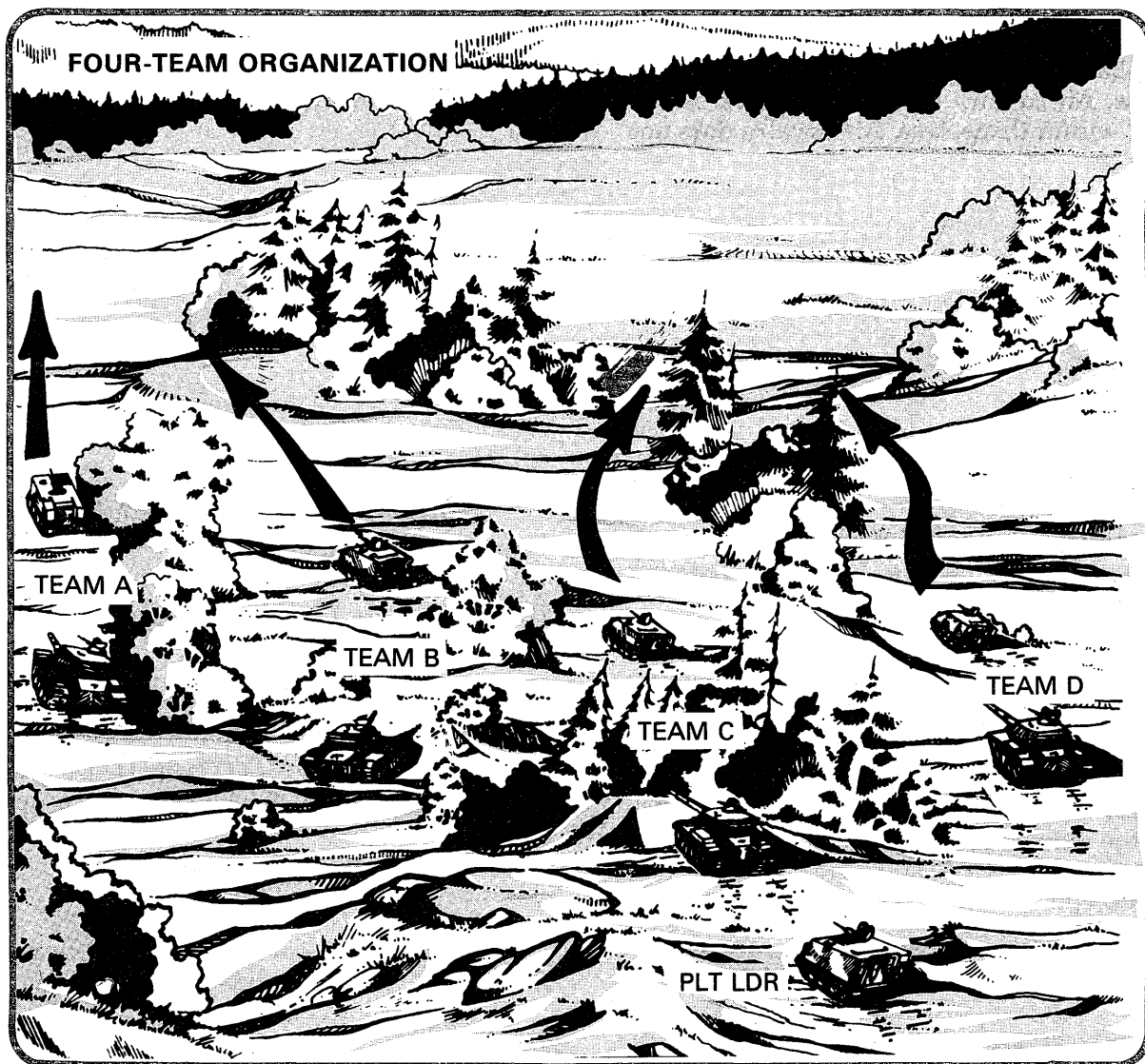
THREE-TEAM ORGANIZATION, TANKS WITH TEAM



THREE-TEAM ORGANIZATION, TANKS CONSOLIDATED



Four-Team Organization. Another platoon organization for combat is the four-team concept. It is used when the area to be covered is very wide and enemy contact is not likely. It is also used when the area contains multiple routes. Each team consists of one scout vehicle and one tank, with the platoon leader going where he can best control his platoon. As the scouts are not working in pairs, this concept should be used only when no other organization for combat will do the job.



AIR CAVALRY

Air cavalry units perform the same missions as ground cavalry and are therefore complementary parts of the cavalry system. Air cavalry provides an increased capability to rapidly reconnoiter and maintain surveillance over wide, relatively open areas. Air cavalry units may operate as organized, or may be reinforced with other maneuver, combat support, and combat service support units. Air cavalry units may be task organized within themselves. Air cavalry does not

have the closing and staying power of ground cavalry, but does have greater mobility. Mobility helps expand the area of battle, particularly in early stages, thus reducing enemy reaction time and ensuring more time for reaction of the friendly main body. Once the battle is joined, air cavalry should not be relegated to rear areas, but should be used with other maneuver elements. How this is done is explained in chapters 5 and 6.

AIR CAVALRY SQUADRON

Organization. Air cavalry squadrons are assigned to corps, infantry, airborne, and airmobile divisions and to air cavalry combat brigades.

An air cavalry squadron (separate) assigned to corps or an air cavalry squadron assigned to an infantry division contains:

Headquarters and Headquarters Troop. The components of headquarters and headquarters troop and their functions are similar to the regimental armored cavalry squadron headquarters and headquarters troop (page 3-8), except:

- *Aviation Platoon*, in addition to providing command and control aircraft to squadron headquarters, contains an aircraft maintenance section and an aviation support section.
- *Aviation Intermediate Aircraft Maintenance Platoon (AVIM)*, pro-

vides a direct support aircraft maintenance capability for all squadron aircraft.

- *Support Platoon* contains all mess teams.
- *ADA Section* contains five air defense weapons teams.

★ *Three Air Cavalry Troops.* See page 3-20.
Armored Cavalry Troop. See page 3-10.

An air cavalry squadron assigned to an airmobile division contains:

Headquarters and Headquarters Troop. The components of headquarters and headquarters troop and their functions are similar to the regimental armored cavalry squadron headquarters and headquarters troop (page 3-8), except:

- *ADA Section* has five shoulder-fired air defense weapons teams.
- *Support Platoon* does not contain a transportation section, but does contain a medical section.
- *Aviation Platoon* is identical to the aviation platoon of headquarters troop, separate air cavalry squadron.

★ *Three Air Cavalry Troops.* See page 3-20.

Cavalry Troop (Wheeled Vehicle Mounted). See page 3-10.

An air cavalry squadron assigned to an airborne division contains:

Headquarters and Headquarters Troop. The components of the headquarters and headquarters troop and their functions are similar to the regimental armored cavalry squadron headquarters and headquarters troop (page 3-8), except:

- *Aviation Platoon* is identical to the aviation platoon of headquarters troop, separate air cavalry squadron.
- *Support Platoon* does not contain a transportation section, but does contain a medical section.
- *ADA Section* has five shoulder-fired air defense weapons teams.

- *Direct Support Aircraft Maintenance Platoon* provides direct support aircraft maintenance for all squadron aircraft.

- *Medical Section* provides the same services as the medical platoon.

★ *Three Air Cavalry Troops.* See page 3-20.

Cavalry Troop (Wheeled Vehicle Mounted). See page 3-10.

An air cavalry squadron assigned to an air cavalry combat brigade contains:

Headquarters and Headquarters Troop is organized the same as that of the Separate Air Cavalry Squadron.

★ *Three Air Cavalry Troops.* See page 3-20.

Organization For Combat. Just as with any other unit, tactical integrity of an air cavalry squadron should be maintained. Sometimes, it may be necessary to place a troop OPCON to a brigade which is being deployed for a special mission.

Like armored cavalry, an air cavalry squadron may be reinforced with maneuver, combat support, and combat service support units. The squadron headquarters and headquarters troop is used in two echelons: an *OIC* and trains.

At times, the task organizing of one or more air cavalry troops and, if assigned, the ground cavalry troop may be necessary. The squadron commander may cross-attach to form troop teams containing the desired ratio of aeroweapons, aeroscouts, aerorifle, and ground cavalry platoons. The same factors applicable to task organizing a ground cavalry troop apply.

AIR CAVALRY TROOP

Organization. Air cavalry troops consist of a troop headquarters, flight operations section, service platoon, and three maneuver platoons.

Troop Headquarters provides administration and command control.

Flight Operations Section performs liaison and coordination for tactical requirements, performs related logistical support, and monitors combat operations of the troop.

Service Platoon performs organizational maintenance on troop aircraft, vehicles, weapons, and signal equipment. It requests, receives, issues, stores, and maintains troop supplies including POL and ammunition.

The three maneuver platoons are:

- *Aeroscout Platoon*, equipped with light observation helicopters, provides the primary reconnaissance and surveillance capability.

- ★ ■ *Reconnaissance Platoon*, provides a limited ground reconnaissance capability to each cavalry troop. The employment of this platoon as an integral part of the troop is discussed in detail by mission later in this manual.

- *Aeroweapons Platoon*, equipped with four attack helicopters and five aeroweapons helicopters capable of carrying automatic weapons, grenade launchers, folding fin aerial rockets, and antitank guided missiles, provides a mix of antitank firepower and high volume direct aerial fires. Attack helicopters equipped with antitank missiles are a powerful weapons system with a significant mobility differential over ground elements and are capable of standing off and defeating heavy armor or other hard targets. In the absence of an armor or mechanized infantry threat, it may be desirable to initially leave these aircraft on the ground, available as the situation develops. Other aeroweapons helicopters, capable of carrying automatic weapons, grenade launchers, and folding fin aerial rockets, provide an immediate aerial suppressive fire capability. Helicopter gunnery techniques are set forth in FM 17-40 and TC 17-17.

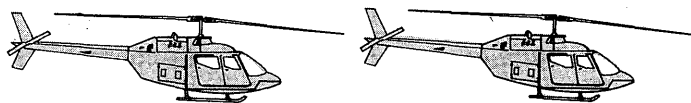
Organizations for Combat.

Troop Headquarters. The air cavalry troop headquarters is normally organized for combat operations into a command post and trains. The *CP* is organized around the flight operations center. It may be located near the squadron *OIC* or at the troop operating base. An air cavalry troop *CP* performs the same functions as a ground cavalry troop *CP*; in

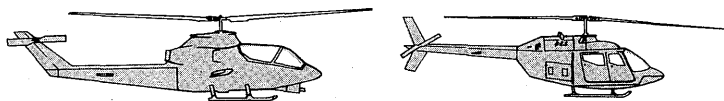
addition, it coordinates scheduling missions and allocation of assets and provides unit flight-following services for troop aircraft. The troop commander controls the troop from his command helicopter or *CP*.

Platoons. The air cavalry troop commander will task organize the troop considering the factors of METT. He may do so in several ways:

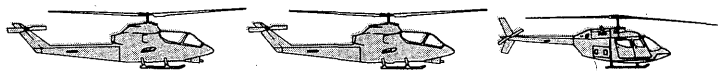
- He may form teams of two or more aircraft to work directly under the troop commander's control. For instance:



Two scout helicopters may be used for reconnaissance when enemy contact is not likely. Such teams serve to maximize the reconnaissance effort and conserve the operational readiness of aeroweapons aircraft.



One scout helicopter and one aeroweapons helicopter may be used when contact is possible or expected. This organization permits fielding the greater number of teams for reconnaissance and surveillance missions.



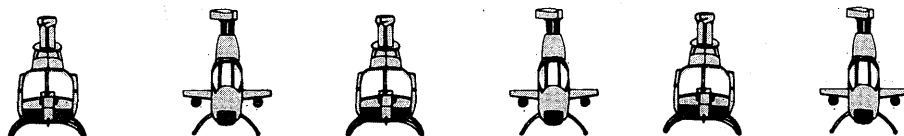
Two aeroweapons helicopters and one scout helicopter may be used when contact is expected or gained.



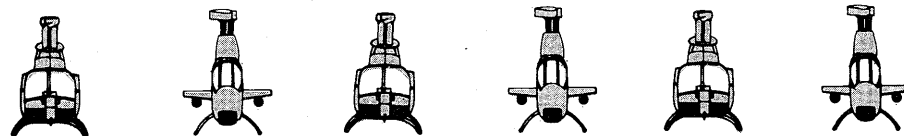
A scout helicopter, an aeroweapons helicopter, and a reconnaissance squad provide the capability to immediately put troops on the ground to reconnoiter, establish OP's or secure critical points.

- Other teams may be formed by different combinations and numbers of aircraft depending on mission. For example:

- Provisional platoons of aeroscouts and aeroweapons may be formed. The reconnaissance platoon may also be included in this organization or left as a separate platoon.



**1ST
PLATOON**



**2D
PLATOON**